

ISSN 2095-7092



# 浙江水利水电学院学报

Journal of Zhejiang University of Water Resources  
and Electric Power

ZHEJIANG SHUILI  
SHUIDIAN XUEYUAN  
XUEBAO

5

2020

第32卷 第5期  
Vol.32 No.5

万方数据

浙江水利水电学院学报

第三十二卷 第五期

总第121期

2020年10月

## 目 次

### 水文化研究

- 清代钱塘江塘工沙水奏折档案及其价值 ..... 王 申(1)  
绍兴山阴后海塘的历史沿革考略 ..... 童志洪(6)

### 水生态研究

- 基于因子分析的水资源风险因子识别 ..... 訾化影(11)  
闽江沙溪流域构建安全生态水系的探索 ..... 刘启够(15)

### 水利水电工程

- 基于 FLAC3D 对古海塘塘前打桩振动的动力响应分析 ..... 王海礼, 祝湛毅, 张 默(18)  
土工膜防渗在鸭子坤水库除险加固中的应用 ..... 潘 勇, 葛为祥, 芮立龙(23)  
基于 BP 神经网络的城市排水系统节能算法优化研究 ..... 陈雪敏, 焦雪松, 曹 浩(27)  
基于灰关联度的泵站施工 LEC 评价改进研究 ..... 付 壮, 王世东(31)  
长输水系统水泵性能监测研究综述 ..... 王朝昊, 王玲花, 胡建永(35)  
杭州市东苕溪流域初始水权定价探索 ..... 杨 云, 童 览, 王玉明(40)  
云南海口磷石膏库排水隧道衬砌补强加固施工技术研究 ..... 钟 猛, 刘日华(46)

### 土木与建筑工程

- 房建基坑支护工程的钢管桩结合土钉墙施工技术 ..... 李 倩(52)  
装配式建筑全过程质量管理中 BIM 技术的应用 ..... 彭忠伟(56)  
基于单箱单室变高度箱形梁的预应力混凝土连续箱梁施工 ..... 饶志喜(60)  
成贵铁路路基基床混凝土开裂原因分析及整治 ..... 周 森(65)

### 机械与自动化工程

- 自动筒纱包装机控制系统的设计 ..... 冯徐鑫, 邓成钢, 戴 曦, 刘国梁, 葛永亮(69)  
汽车排气系统模态分析及吊钩位置设计 ..... 王 娜, 张学萍(74)  
基于 solidworks 的快开人孔参数化设计与运动仿真 ..... 王 莺, 龚彦业(79)

### 教育与教学技术

- 工程教育认证背景下《电气控制与 PLC》课程理实一体化教学模式探索 ..... 方贵盛, 王红梅, 戴 曦(83)  
MOOC 与 SPOC 教学模式应用中的问题及改进 ..... 李 博(89)  
基于项目化任务驱动法的教学改革实践  
——以《建筑工程计量与计价》课程为例 ..... 李正焜, 陈闻思, 刘一鸣(92)

# JOURNAL OF ZHEJIANG UNIVERSITY OF WATER RESOURCES AND ELECTRIC POWER

Vol. 32 No. 5 (Total 111) Oct. 2020

## CONTENTS

### Water Culter Research

- Archives Research and Historical Value of Seawall and Hydrology of Qiantang River in Qing Dynasty  
..... WANG Shen ( 1 )
- Historical Evolution of Houhai Seawall in Shanyin of Shaoxing ..... TONG Zhi-hong ( 6 )

### Water Ecology Research

- Identification of Water Resources Risk Factors Based on Factor Analysis ..... ZI Hua-ying (11)
- On Construction of Safe Ecological Water System in Shaxi Watershed of Minjiang River ... LIU Qi-gou (15)

### Water Conservancy and Hydropower Engineering

- Dynamic Response Analysis of Ancient Seawall for Pile Driving Vibration Based on FLAC 3D  
..... WANG Hai-li, ZHU Zhan-yi, ZHANG Mo (18)
- Application of Geomembrane Seepage Proofing in Reinforcement of Yazikun Reservoir  
..... PAN Yong, GE Wei-xiang, RUI Li-long (23)
- Optimization Research on Energy-saving Scheduling Algorithm of Urban Drainage System  
Based on BP Neural Network ..... CHEN Xue-min, JIAO Xue-song, CAO Hao (27)
- Research on LEC Evaluation of Pumping Station Construction Based on Grey Correlation  
..... FU Zhuang, WANG Shi-dong (31)
- Research on Pump Performance Monitoring of Long-distance Water Conveyance System  
..... WANG Chao-hao, WANG Ling-hua, HU Jian-yong (35)
- Research on Initial Water Right Pricing in Hangzhou Eastern Tiaoxi Watershed  
..... YANG Yun, TONG Lan, WANG Yu-ming (40)
- Study on Lining Reinforcement Construction Technology of Drainage Tunnel in Haikou  
Phosphogypsum Site in Yunnan ..... ZHONG Meng, LIU Ri-hua (46)

### Civil and Architectural Engineering

- Construction Technology of Steel Pipe Pile with Soil Nailing Wall in Housing Foundation  
Pit Supporting Engineering ..... LI Qian (52)
- On BIM Technology Application in Whole Process Quality Management of Assembly Buildings  
..... PENG Zhong-wei (56)
- Construction of Prestressed Concrete Continuous Box Girder Based on Single Box and  
Single Cell Variable Height Box Girder ..... RAO Zhi-xi (60)
- Analysis and Treatment of Concrete Cracking of Leveling Layer of Chenggui Express  
Railway Subgrade ..... ZHOU Sen (65)

### Mechanical and Automation Engineering

- Design of Control System of Automatic Cheese Packing Machine  
..... FENG Xu-xin, DENG Cheng-gang, DAI Xi, LIU Guo-liang, GE Yong-liang (69)
- Modal Analysis and Hanger Position Design of Automobile Exhaust System  
..... WANG Na, ZHANG Xue-ping (74)
- Parametric Design and Dynamic Simulation of Quick Opening Manhole Based on Solidworks  
..... WANG Ying, GONG Yan-ye (79)

### Education and Teaching Techniques

- Teaching Reform of Integrated Teaching of Theory and Practice of Electrical Control and PLC Course  
in Context of Engineering Education Certification ..... FANG Gui-sheng, WANG Hong-mei, DAI Xi (83)
- Problems and Suggestions of MOOC + SPOC Teaching Mode in College Teaching ..... LI Bo (89)
- Teaching Practice Based on Project-based Task-driven Method  
——The Case of Measurement and Valuation of Construction Engineering  
..... LI Zheng-kun, CHEN Wen-si, LIU Yi-ming (92)