

ISSN 1002-0624

# 东北水利水电

Water Resources & Hydropower of Northeast China



2019 NO. 5

- 引水发电系统钢岔管布置方案研究
- 石龙大坝溢流面裂缝渗水处理
- 三江平原水土流失防治及治理技术体系

□ 水利部松辽水利委员会 主办

# 东北水利水电

DONGBEI  
SHUILI SHUIDIAN  
(月刊)

2019年第5期  
5月15日出版  
(第37卷总第418期)  
1983年创刊

全国优秀科技期刊  
中国学术期刊(光盘版)全文收录期刊  
中文科技期刊数据库全文收录期刊  
万方数据库全文收录期刊  
超星期刊域出版平台全文收录期刊  
~~~~~

主管单位 中华人民共和国水利部  
主办单位 水利部松辽水利委员会  
编辑出版 《东北水利水电》杂志社  
编委会主任 党连文  
社 长 赵玉江  
主 编 林淀翔  
副 主 编 任海霞 师福东  
责任 编辑 师福东  
地 址 长春市解放大路4188号  
邮 政 编 码 130021  
电 话 0431-85607758  
邮 箱 dbsd@slwr.gov.cn  
刊 号 ISSN 1002-0624  
印 刷 长春祥泰彩色印刷厂  
订 阅 全国各地邮局  
定 价 4.60元  
广告经营许可证:  
吉林省工商广字第01091号

## 目 次

### 规划设计

- 引水发电系统钢岔管布置方案研究..... 郑军, 张鹏, 宁卫琦(1)  
西藏某水电站坝基开挖优化设计..... 吴运通, 王宝文, 许蕴宝, 汪洋(3)  
基于Geo-Studio软件的泵站深基坑边坡稳定分析..... 赵云, 温琪(6)  
青山水库滑坡坍岸变形体治理方案比选..... 李飞(8)  
简化三角形法在塘坝设计中的应用..... 张峰远, 齐滨(11)  
新疆塔里木灌区恰铁干渠改建工程设计..... 吴自栋(13)  
水利输水隧洞二次衬砌计算..... 吴蕴洲(16)  
精准加热防冻防渗渠道工程设计与模拟研究..... 孙国梅(19)  
水电站过鱼设施溢流口底部铺石厚度优化设计..... 潘凯锋(21)

### 工程施工

- 石龙大坝溢流面裂缝渗水处理..... 张冬冬, 张鹏, 姜军, 李帅(24)  
自密实混凝土在引水隧洞衬砌中的应用..... 贺杰(26)  
岩坎爆破拆除技术在辽宁某引水工程中应用..... 施建军(29)

### 水文水资源

- 基于MIKE11的观音阁水库泄洪流量演进过程研究..... 孙宇航(31)  
GPS技术在水文测量中的应用分析..... 王春蓓, 王延超, 唐永美(34)

### 水利科研

- 基于MIKE-21水动力学模型山洪灾害评估研究..... 于金源(36)  
岩温对输水隧洞衬砌混凝土应力场影响分析..... 李昕(39)

### 水生态环境

- 三江平原水土流失防治及治理技术体系..... 张峰(42)  
青山冲水库弃渣场水土保持措施设计..... 张鑫, 鲍彪, 马士龙(44)  
吉林省松花江治理保护现状分析..... 赵靓, 廉喜旺(47)  
扎龙湿地水质评价与水环境分析..... 胡宝军(49)  
质量控制措施在水质监测中的应用..... 滕显(51)  
2017年本溪市水功能区水资源质量状况分析..... 任艳彦(54)

### 防汛与抗旱

- 非工程措施在辽宁省治涝实践中的应用..... 张云(56)

### 工程建设与管理

- 高寒高海拔地区库岸边坡稳定性分析..... 纪南, 程宪龙, 刘刊, 高博(58)  
超声波对测及数字成像在混凝土裂缝检测中的应用.....  
杨嘉明, 刘凯, 韩飞, 张威, 曾庆洋(61)

- 基于UDEC的坝区蓄水后的岸坡稳定性分析..... 李雪梅(64)

### 专题研究

- 北方寒冷地区沼气池的应用与发展研究..... 赵会林, 鲁新蕊(67)  
水库移民扶持政策落实情况监测评估..... 任书军, 张诚, 翟强(69)  
封底:清泉石上流..... 张新华 摄

## CONTENTS

### Planning and design

|                                                                                                                           |                                                         |
|---------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|
| Study on steel branch pipe layout scheme of water diversion and power generation system .....                             | ZHENG Jun, ZHANG Peng, NING Wei -qi (1)                 |
| Optimization design of dam foundation excavation for some a hydropower station in Tibet .....                             | WU Yun -tong, WANG Bao -wen, XU Yun -bao, WANG Yang (3) |
| Stability analysis of side slope for deep foundation pit of pumping station based on Geo-Studio software .....            | ZHAO Yun, WEN Qi (6)                                    |
| Comparison and selection of treatment scheme of deformation body for landslide bank slump of Qingshan reservoir.....      | LI Fei (8)                                              |
| Application of simple triangle method in pond design.....                                                                 | ZHANG Feng -yuan, QI Bin (11)                           |
| Design of reconstruction project for Qiatie main canal of Tarim Irrigation Area in Xinjiang.....                          | WU Zi -dong (13)                                        |
| Calculation of secondary lining for water conveyance tunnel.....                                                          | WU Yun -zhou (16)                                       |
| Design and simulation study on precise heating and anti-freezing and seepage prevention for canal project.....            | SUN Guo -mei (19)                                       |
| Optimization design of stone paving thickness at bottom of over flow of fish passing facility in hydropower station ..... | PAN Kai -feng (21)                                      |

### Project construction

|                                                                                                               |                                                        |
|---------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| Seepage treatment of overflow surface crack for Shilong dam.....                                              | ZHANG Dong -dong, ZHANG Peng, JIANG Jun, LI Shuai (24) |
| Application of self-compacting concrete in lining of water division tunnel.....                               | HE Jie (26)                                            |
| Application of retaining rock blasting demolition technique in some a water division project in Liaoning..... | SHI Jian -jun (29)                                     |

### Hydrology and water resources

|                                                                                      |                                                     |
|--------------------------------------------------------------------------------------|-----------------------------------------------------|
| Study on flood discharge routing process of Guanyinge reservoir based on MIKE11..... | SUN Yu -hang (31)                                   |
| Application analysis of GPS technology in hydrology survey.....                      | WANG Chun -bei, WANG Yan -chao, TANG Yong -mei (34) |

### Hydraulic study

|                                                                                                          |                   |
|----------------------------------------------------------------------------------------------------------|-------------------|
| Study on mountain torrent disaster evaluation based on MIKE21 hydrodynamic model.....                    | YU Jin -yuan (36) |
| Influence analysis of rock temperature on stress field of lining concrete for water division tunnel..... | LI Xin (39)       |

### Water ecological environment

|                                                                                                            |                                        |
|------------------------------------------------------------------------------------------------------------|----------------------------------------|
| Prevention and treatment technique system of soil and water loss in Sanjiang Plain.....                    | ZHANG Feng (42)                        |
| Design of soil and water conversation measurement for waste disposal area of Qingshanchong reservoir ..... | ZHANG Xin, BAO Biao, MA Shi -long (44) |
| Present situation analysis of treatment and protection of Songhuajiang River in Jilin Province.....        | ZHAO Liang, LIAN Xi -wang (47)         |
| Water quality evaluation and water environment analysis for Zhalong Wetland.....                           | HU Bao -jun (49)                       |
| Application of quality control measure in water quality monitoring.....                                    | TENG Yu (51)                           |
| Analysis of water resources quality situation of water function area in Benxi City in 2017.....            | REN Yan -yan (54)                      |

### Flood control and drought relief

|                                                                                                 |                |
|-------------------------------------------------------------------------------------------------|----------------|
| Application of non-engineering measures in waterlog control practice in Liaoning Province ..... | ZHANG Yun (56) |
|-------------------------------------------------------------------------------------------------|----------------|

### Project construction and management

|                                                                                                       |                                                                    |
|-------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|
| Analysis of bank slope stability of reservoir in alpine-cold and high altitude area .....             | JI Nan, CHENG Xian -long, LIU Kan, GAO Bo (58)                     |
| Application of ultrasonic bidirectional testing and digital imaging in concrete crack detection ..... | YANG Jia -ming, LIU Kai, HAN Fei, ZHANG Wei , ZENG Qing -yang (61) |

|                                                                                   |                  |
|-----------------------------------------------------------------------------------|------------------|
| Stability analysis of bank slope after impounding of dam area based on UDEC ..... | LI Xue -mei (64) |
|-----------------------------------------------------------------------------------|------------------|

### Monographic study

|                                                                                          |                                            |
|------------------------------------------------------------------------------------------|--------------------------------------------|
| Application and development study of biogas digester in northern cold area.....          | ZHAO Hui -lin, LU Xin -rui (67)            |
| Implementation monitoring and evaluation for support policy of reservoir migration ..... | REN Shu -jun, ZHANG Cheng, ZHAI Qiang (69) |

---

### SAPONSOR

Song-Liao Water Resources Commission  
Ministry of Water Resources,P.R.China

### ADDRESS

4188Jiefang Road Changchun,P.R.China

### CODE NO.

ISSN 1002-0624  
CN 22-1097/TV

TEL. (0431)85607758

---

### EDITOR AND PUBLISHER

Magazine Office of 《Water Resources  
and Hydropower of Northeast China》

### EDITOR IN CHIEF

LIN Dian-xiang

### POST CODE 130021

### E-mail

dbsd@slwr.gov.cn