

# 工程应用篇

## 目 次

### 述评与讨论

- 侧流污泥生物强化技术及其在污水厂升级改造中的适用性 ..... 刘智晓,胡春萍,詹卫东,等(1)  
分区供水技术在漏损控制中的研究现状与进展 ..... 刘俊,孙佳,俞国平(7)  
流域水环境中雌激素与医药品的检测及其生态毒性 ..... 曹金玲,史江红,韩蕊,等(11)  
反渗透海水淡化能量回收技术的发展及应用 ..... 潘献辉,王生辉,杨守志,等(16)  
上海市污水处理厂污泥用于园林绿化的安全性分析 ..... 程晓波(20)  
再生水回灌地下的水质安全控制指标体系探讨 ..... 魏东斌,魏晓霞(23)  
微生物技术在煤矿酸性水处理中的应用 ..... 崔树军,张建云,谷立坤,等(27)

### 热点专题(太湖流域水污染治理)

- 无锡市新城污水处理厂提标改造工程实践 ..... 祝君乔(29)  
高淳污水处理厂二期工程工艺设计 ..... 耿震,沈文华,李大成,等(32)  
戚墅堰污水厂提标改造工程 ..... 刘科军,张丹,朱迪,等(36)

### 雨洪控制利用专题

- 关于城市暴雨内涝灾害的若干问题和对策 ..... 张悦(41)  
上海城市屋面雨水利用设施长期运行效率分析 ..... 程江,丁敏,潘炜,等(43)  
某大型合流污水输送干线初期雨水设施运行特征分析 ..... 高磊,丁敏,潘炜,等(48)  
中国城市雨洪控制利用模式研究 ..... 车伍,张伟,李俊奇,等(51)  
渗透排放一体生态雨水系统的工程应用 ..... 王耀堂,孙自亮,张琦智,等(58)  
城市道路雨水生态处置技术及其案例分析 ..... 李俊奇,王文亮,边静,等(60)  
上海市老旧混接雨水系统改造效果的案例分析 ..... 马丽,李田,姚杰(65)  
深圳市宝安区雨洪利用方案与分析 ..... 邹安平(71)  
基于数字排水技术的城市雨洪控制方案设计与评估 ..... 赵冬泉,邢薇,佟庆远,等(74)  
典型老城区管网沿河排放状况调查与分析 ..... 陶霞,管运涛,王慧,等(78)

### 设计经验

- 铁炭还原/生物降解/臭氧联合处理硝基氯苯类废水 ..... 许恒韬,张轶,徐向阳(83)  
成都市卷烟物流基地自动喷水灭火预作用系统设计 ..... 朱瑞,叶宽(86)  
普光气田取水工程设计变更 ..... 李远兵,刘冬林,张三辉,等(89)  
自循环多功能工业事故水塔的设计 ..... 金亚飚(92)

- MSBR 工艺处理低浓度城镇污水的设计与运行控制参数 ..... 全玉芳,梅荣武(95)  
离心泵工作点的调节与加压泵站的节能分析 ..... 叶云清(99)  
春南污水处理厂悬挂链曝气器工艺设计 ..... 李金国,程子悦,李文秋,等(103)

## 工程实例

- 深圳华侨城欢乐海岸北区的雨水收集与处理 ..... 徐以时(106)  
水解酸化/接触氧化/ $\text{ClO}_2$  消毒处理医院污水 ..... 邓小红(110)  
河南油田双河水厂虹吸滤池改造及其效果评价 ..... 汤俊灵,王伟,郭庆全(113)  
BAF 组合工艺处理码头仓储企业化学品废水 ..... 黎京士,汪晓军(115)  
中药废水两相厌氧生物处理工艺的工程调试 ..... 刘天顺,闫险峰,任南琪,等(119)

## 节水与回用

- 屋面雨水作为冲厕用水的案例分析 ..... 李婷婷,刘晶茹,李东,等(122)

## 分析与监测

- 硫酸钛光度法测定  $\text{O}_3/\text{H}_2\text{O}_2$  体系中低浓度  $\text{H}_2\text{O}_2$  ..... 刘小为,陈忠林,沈吉敏,等(126)  
低温消解原子荧光法测定活性污泥中汞含量 ..... 印成,张继蓉,李显芳,等(130)

## 节能减排

- 智能化节电设备在水泵上的应用 ..... 李焦明,薛平智(133)

## 运行与管理

- 供水泵站水泵节能改造及其效益分析 ..... 陈德强,马敬(135)  
垃圾渗滤液处理的常见问题及解决措施 ..... 李君,杜昱,孙月驰,等(138)  
高温 UASB 产沼工程的设计、运行与管理 ..... 滕红文(141)

## 施工与监理

- 城市污水处理厂设备带负荷调试的监理实践 ..... 邱伟坚(144)

## 水工业窗口

- Sigma 流量计在市政排水管网的成功应用 ..... 黄伟明,方闻,Marcia Kinley(148)

## 技术交流

- 广州市某河涌流域排水管网损坏普查及分析 ..... 陈俊涛,李亚选(151)  
防渗、抗裂技术用于污水处理厂构筑物施工 ..... 刘银平(153)

## 企业动态:(40)

## ENGINEERING APPLICATION EDITION

# C O N T E N T S

### REVIEWS AND DISCUSSIONS

Side-stream Sludge Bio-augmentation Technologies and Their Applicability in Upgrading and Reconstruction of Wastewater Treatment Plants .....	LIU Zhi-xiao, et al. ( 1 )
Current Situation and Progress of Water Distribution System Zoning Technologies for Water Loss Control .....	LIU Jun, et al. ( 7 )
Determination of Estrogens and Pharmaceuticals and Their Ecological Toxicity in Aquatic Environment ...	CAO Jin-ling, et al. ( 11 )
Development and Use of Energy Recovery Technology in RO Seawater Desalination .....	PAN Xian-hui, et al. ( 16 )
Safety Analysis on Greening Gardens with Sewage Sludge from WWTPs in Shanghai .....	CHENG Xiao-bo(20)
Discussion on Index System for Controlling Quality of Reclaimed Water for Groundwater Recharge .....	WEI Dong-bin, et al. ( 23 )
Application of Microbial Technology in Treatment of Acid Mine Water .....	CUI Shu-jun, et al. ( 27 )

### HOT TOPICS(Pollution Control in Taihu Lake Basin)

Upgrading and Reconstruction of Wuxi Xincheng Wastewater Treatment Plant .....	ZHU Jun-qiao(29)
Process Design of Second-stage Project of Gaochun Wastewater Treatment Plant .....	GENG Zhen, et al. ( 32 )
Upgrading and Reconstruction Project of Qishuyan Wastewater Treatment Plant .....	LIU Ke-jun, et al. ( 36 )

### STORMWATER MANAGEMENT TOPIC

Some Problems and Solutions on Urban Storm Waterlogging Disaster .....	ZHANG Yue(41)
Long-term Operational Efficiency Analysis of Roof Rainwater Utilization System in Shanghai City .....	CHENG Jiang, et al. ( 43 )
Analysis of First Flush Stormwater Facilities for a Large Combined Sewerage System .....	GAO Lei, et al. ( 48 )
Study on Patterns of Urban Stormwater Management in China .....	CHE Wu, et al. ( 51 )
Engineering Application of Integrated Rainwater Infiltration and Drainage System .....	WANG Yao-tang, et al. ( 58 )
Eco-technologies and Case Study on Disposal of Urban Road Runoff .....	LI Jun-qi, et al. ( 60 )
Case Study on Reconstruction Efficiency of Old Storm Sewer Systems with Serious Illicit Connection in Shanghai .....	MA Li, et al. ( 65 )

Analysis on Stormwater Management Project in Baoan District, Shenzhen City .....	ZOU An-ping(71)
Design and Evaluation of Urban Stormwater Management Projects Based on DigitalWater Drainage System .....	ZHAO Dong-quan, et al. ( 74 )
Investigation and Analysis on Status of Discharge along River from Drainage Network in Typical Old Urban Districts .....	TAO Xia, et al. ( 78 )

### DESIGN EXPERIENCES

Combined Process of Iron-carbon Reduction, Biological Degradation and Ozonation for Treatment of Chloronitrobenzene Wastewater .....	XU Heng-tao, et al. ( 83 )
Design of Preaction Sprinkler System in Tobacco Logistics Base of Chengdu Tobacco Corporation .....	ZHU Rui, et al. ( 86 )
Change in Design of Water Intake Works for Puguang Gas Field .....	LI Yuan-bing, et al. ( 89 )

Design of Multifunctional Self-circulating Industrial Emergency Water Tower .....	JIN Ya-biao(92)
Design and Operation Parameters of MSBR Process for Treatment of Low-concentration Municipal Sewage .....	QUAN Yu-fang, et al. (95)
Adjustment of Operating Point of Centrifugal Pumps and Energy-saving Analysis of Booster Pumping Station .....	YE Yun-qing(99)
Design of Suspended Chain Aeration Process in Chunnan WWTP .....	LI Jin-guo, et al. (103)

## PROJECT CASES

Rainwater Harvesting and Treatment System at Northern Happy Coast in Overseas Chinese Town in Shenzhen .....	XU Yi-shi(106)
Hydrolysis Acidification/Contact Oxidation/ClO <sub>2</sub> /Filtration for Treatment of Hospital Sewage .....	DENG Xiao-hong(110)
Reconstruction of Siphon Filter in Shuanghe Water Treatment Plant in Henan Oil Field and Effect Assessment .....	TANG Jun-ling, et al. (113)
BAF Combined Process for Treatment of Chemical Wastewater from Harbor Warehouse Enterprise .....	LI Jing-shi, et al. (115)
Commissioning of Two-phase Anaerobic Biological Process for Treatment of Traditional Chinese Medicine Wastewater .....	LIU Tian-shun, et al. (119)

## WATER CONSERVATION AND REUSE

Case Analysis of Using Roof Rainwater as Toilet Flushing Water .....	LI Ting-ting, et al. (122)
--	----------------------------

## ANALYSIS AND MONITORING

Spectrophotometric Determination of Low Concentration of Hydrogen Peroxide in O <sub>3</sub> /H <sub>2</sub> O <sub>2</sub> System Using Titanium Sulfate .....	LIU Xiao-wei, et al. (126)
Determination of Mercury in Activated Sludge by Low-temperature Digestion Atomic Fluorescence Spectrometry .....	YIN Cheng, et al. (130)

## ENERGY SAVING AND EMISSION REDUCTION

Application of Intelligent Electricity-saving Equipment to Pumps .....	LI Jiao-ming, et al. (133)
--	----------------------------

## OPERATION AND MANAGEMENT

Energy-saving Reconstruction of Water Pump and Its Benefit Analysis in Water Supply Pump Station .....	CHEN De-qiang, et al. (135)
Problems and Solutions in Treatment of Landfill Leachate by MBR Process .....	LI Jun, et al. (138)
Design, Operation and Management of Thermophilic UASB Process for Biogas Production .....	TENG Hong-wen(141)

## CONSTRUCTION AND SUPERVISION

Supervision Practice in Commissioning of Equipment under Load in Municipal Wastewater Treatment Plant .....	QIU Wei-jian(144)
---	-------------------

## WINDOWS OF WATER INDUSTRY

Successful Application of Sigma Flow Meter in Municipal Sewer System .....	HUANG Wei-ming, et al. (148)
--	------------------------------

## TECHNICAL EXCHANGE

General Investigation and Analysis on Damage of Drainage Pipe Network at a River Basin in Guangzhou City .....	CHEN Jun-tao, et al. (151)
Application of Anti-seepage and Cracking Resistance Technologies to Construction of Structures in WWTP .....	LIU Yin-ping (153)