

Q K 1 8 4 2 7 7 4



# 节水灌溉

2018 7

中国国家灌溉排水委员会 中国灌溉排水发展中心  
武汉大学 国家节水灌溉北京工程技术研究中心

主办

WATER SAVING IRRIGATION



天业节水  
TIANYE DRIP IRRIGATION

股票名称：天业节水 股票代码：00840.HK  
中国节水灌溉行业标准制定者

绿色高效  
为农服务

(王梓林摄影)

ISSN 1007-4929



07>

9 771007 492082



企业信息



节水农业网



新疆天业节水灌溉股份有限公司  
XINJIANG TIANYE WATER SAVING IRRIGATION SYSTEM CO.,LTD.

地址：新疆石河子市经济技术开发区北三东路36号  
电话：0993-2623165 2623175  
传真：0993-2623180  
网址：[www.tianyejieshui.com.cn](http://www.tianyejieshui.com.cn)  
邮箱：[tyjs@xjymail.com](mailto:tyjs@xjymail.com)

# 节 水 灌 溉

2018年第7期 总第275期

## 目 次

### □试验研究□

- 隔膜深度偏差对电磁阀的水力性能影响分析 ..... 盛祥民 崔春亮 陈志卿 等(1)  
不同残膜量对土壤环境及玉米生长发育的影响 ..... 杜利 李援农 陈朋朋 等(4)  
深层灌水下冬小麦根系分布及吸水能力的研究 ..... 王璞 孙西欢 马娟娟 等(10)  
日光温室供水系统灌溉水温变化特性的研究 ..... 胡婧娟 樊贵盛(15)  
泾惠渠灌区夏玉米非充分灌溉制度分析 ..... 蔡晓东 陈新明 曹晓华 等(20)  
不同竖管布置方式下的坡地喷灌水滴直径分布 ..... 惠鑫 陈俊英 张林 等(25)  
塑料介质过滤器的水力性能及泥沙处理特性研究 ..... 段腾 张胜江 郭涛(31)  
深松耕条件下调亏灌溉对冬小麦生长及产量的影响 ..... 张玉顺 路振广 邱新强 等(36)  
痕量灌溉不同施肥量对茄子产量及品质的影响 ..... 刘秋丽(43)

### □水环境与水资源□

- 雨水回用于人工湖的水质安全评价 ..... 张肖 金星龙(46)  
基于景观变化的河口湿地生态环境需水量研究 ..... 康思宇 周林飞 胡艳海(51)  
广花盆地浅层地下水环境质量评价 ..... 庞园 李志威 曾慧 等(56)  
基于云模型的水环境质量评价——以贾鲁河郑州段为例 ..... 汪伦焰 曹永超 李慧敏 等(61)

### □工程技术□

- 聚丙烯纤维混凝土衬砌坝应用数值模拟 ..... 郑慧慧(65)  
轻小型喷灌机桁架结构力学性能分析与优化设计 ..... 曹炜林 朱德兰 葛茂生 等(71)  
基于互联网+电动 PE 截止阀研发及应用 ..... 高建新 何建村 白云岗(76)  
基于逆向工程的混肥搅拌器重构及 CFD 模拟 ..... 吴亮亮 李英钗 檀海斌 等(79)  
轻小型移动式喷滴灌两用机组研发及关键部件选型分析 ..... 胡斌(85)

### □工程管理□

- 西北干旱区水资源利用与经济要素的匹配研究 ..... 李万明 黄程琪(88)  
基于 Free Search 的植被叶面积指数 Logistic 模型研究 ..... 朱伟峰 王斌 杨军明(94)  
基于植物生物学参数的多枝柽柳耗水量估算方法 ..... 李双 杜建括(98)  
农业节水灌溉服务定价方法与应用研究 ..... 杨文光 朱美玲(104)  
基于综合权重 SMI-P 法的广西人水和谐度量化评价 ..... 王大洋 黄凯 莫崇勋 等(107)

# Water Saving Irrigation

## ( Monthly )

July 2018

No.7( 2018 ), Total No.275

### Contents

Influence of Diaphragm Depth Deviation on Hydraulic Performance of Solenoid Valve .....	SHEN Xiang-min, CUI Chun-liang, CHEN Zhi-qing, et al.(1)
Effects of Different Residual Film on the Growth and Soil Environment of Maize .....	DU Li, LI Yuan-non, CHEN Peng-peng, et al.(4)
Study on Root Distribution and Water Absorption Capacity of Winter Wheat Under Different Depth Irrigation Treatments .....	WANG Pu, SUN Xi-huan, MA Juan-juan, et al.(10)
An Experimental Study on Irrigation Water Temperature Change Characteristics of Greenhouse Water Supply System .....	HU Jing-juan, FAN Gui-sheng(15)
Insufficient Irrigation Schedule for Summer Corn in Jinghuiqu Irrigation Area .....	CAI Xiao-dong, CHEN Xin-ming, CAO Xiao-hua, et al.(20)
Droplet Diameter Distribution for Sprinkler Irrigation Under Different Layouts of Standpipe on Sloping Land .....	HUI Xin, CHEN Jun-ying, ZHANG Lin, et al.(25)
Study on Hydraulic Performance and Sediment Handling Capacity of PVC Plastic Media Filter .....	DUAN Teng, ZHANG Sheng-jiang, GUO Tao(31)
Effect of Regulated Deficit Irrigationon with Subsoiling on Growth and Yield of Winter Wheat .....	ZHNAG Yu-shun, LU Zheng-guang, QIU Xin-qiang, et al.(36)
Effect of Different Fertilizer Application Amount on Yield and Quality of Eggplant in Greenhouse .....	LIU Qiu-li(43)
Water Quality Safety Evaluation of Rainwater Reused for Artificial Lake .....	ZHANG Xiao, JIN Xing-long(46)
A Study on Eco-environment Water Demand of Estuary Wetland Based on Landscape Change .....	KANG Si-yu, ZHOU Lin-fei, HU Yan-hai(51)
Shallow Groundwater Environmental Quality Evaluation of Guanghua Basin .....	PANG Yuan, LI Zhi-wei, ZENG Hui, et al.(56)
Water Environment Quality Evaluation Based on Cloud Model —— A Case Study of Jialu River in Zhengzhou .....	WANG Lun-yan, CAO Yong-chao, LI Hui-min, et al.(61)
Numerical Simulation of Application of Polypropylene Fiber Reinforced Concrete Lining Dam .....	ZHENG Hui-hui(65)
Mechanical Performance Analysis and Optimization Design of Truss Structure of Light and Small Sprinkler Irrigation Machine .....	CAO Wei-lin, ZHU De-lan, GE Mao-sheng, et al.(71)
Development and Application of Internet PE Electric Valve .....	GAO Jian-xin, HE Jian-cun, BAI Yun-gang(76)
Reconstitution and CFD Simulation of Fertilizer Mixing Agitator Based on Reverse Engineering .....	WU Liang-liang, LI Ying-chai, TAN Hai-bin, et al.(79)
Design of Sprinkler-Drip Dual-Purpose Irrigation Machine and Selection of Key Components .....	HU Bin(85)
The Study of Matching Between Utilization of Water Resource and Economic Factors in the Northwest Arid Area of China .....	LI Wan-ming, HUANG Cheng-qi(88)
A Logistic Model of Vegetation Leaf Area Index Calibrated by Free Search .....	ZHU Wei-feng, WANG Bin, YANG Jun-ming(94)
An Estimation Method for Water Consumption of Tamarix Ramosissima Ledeb Based on Plant Biological Parameters .....	LI Shuang, DU Jian-kuo(98)
Research and Application of Pricing Method for Agricultural Water Saving Irrigation Service .....	YANG Wen-guang, ZHU Mei-ling(104)
Quantitative Evaluation of Human-water Harmony in Guangxi Based on Comprehensive Weight SMI-P Method .....	WANG Da-yang, HUANG Kai, MO Chong-xun, et al.(107)

Competent Authorities: Ministry of Water Resources  
Sponsor: Chinese National Committee on Irrigation and Drainage  
China Irrigation and Drainage Development Centre  
Wuhan University  
National Center of Efficient Irrigation Engineering and Technology Research-Beijing

Publisher and editor: Editorial Department of Water Saving Irrigation  
( Wuhan University, Wuhan, 430072, China )

Editor in Chief: Li Yuanhua      Distribute Scope: Worldwide

Domestic Subscription: Every Post Office in China

E-mail: jieshuiguangai@188.com

Homepage: http://www.irrigate.com.cn



全国统一热线：022-5967-9321  
登陆官网：[www.dyjs.com](http://www.dyjs.com)



WISDOM WATER

智 慧 水 务

大禹节水集团股份有限公司

