

节能 (月刊)

Jieneng

中国核心期刊(遴选)数据库全文收录期刊
中国学术期刊综合评价数据库(CAJCED)统计源期刊
中国期刊全文数据库(CJFD)全文收录期刊
中文科技期刊数据库全文收录期刊
1981年创刊 第36卷第3期(总第414期)
2017年3月15日出版

主管:辽宁省科学技术厅
主办:辽宁省科学技术情报研究所
辽宁省能源研究会
主任:王笑
副主任:王建成
主编:董媛媛
责编:佟昕 赵博
编辑:韩倩茜 石琳 孟双 林晓晨 田源
编辑部电话:(024)83186050
广告部电话:(024)83186053
传真:(024)83186052
电子信箱:jieneng1981@vip.sina.com
网址:www.jieneng1981.cn
出版:《节能》杂志社 邮编:110168
地址:沈阳市浑南新区朗月街2甲号
印刷:沈阳中科印刷有限责任公司
订阅:全国各地邮政局
国内发行:辽宁省邮政公司报刊发行公司
国外发行:中国国际图书贸易总公司
邮发代号:8-150 国外:M5170
刊号:ISSN1004-7948
CN21-1115/TK
广告经营许可证号:2101001500026
开户名:辽宁省科学技术情报研究所
开户行:建设银行沈阳浑南中路支行
账号:21050143560109123456
定价:每期10.00元 全年120.00元



扫描二维码
获得更多《节能》资讯

目次

综述

- 液相流体加剂减阻相关理论及其应用进展
冯潇霄,谢佩兰,代晓东,等(4)
我国太阳能集热器的现状及未来发展 李彬(9)
基于黑龙江省高校的大学生节能减排行为研究
何文珍,王玉婉,王春蕾,等(12)

研究与探讨

- 地源热泵-太阳能复合系统与冰蓄冷空调技术联合运行的可行性研究 张晓明,刘春强(19)
包含多变过程的 Dual-Miller 循环有限时间热力学分析
尤江,陈林根,吴志祥,等(25)
基于 PLC 的厂区供水模式的优化设计 ··· 夏鸣,崔道平(31)
盘管与填料复合型横流式冷却塔热力性能分析
贾祥钦,卢岩飞(34)
异源传感器气象情报信息融合算法
符君,佟昕,周海琨,等(38)
防火防爆厂矿环境下高压气体放电灯节电技术研究及应用
郭瑾(41)
基于复杂网络的燃煤锅炉结构调整分析
沈志斌,孙庆明,胡素峰,等(44)

电力行业节能

- 生物质循环流化床锅炉烟气脱硝技术研究与应用
李廉明,李秋萍,俞燕,等(47)
电力项目成本管理策略探析 段世方(50)
300MW 亚临界机组节能改造技术路线简述 ··· 杨磊磊(54)
锅炉汽包水位控制实例 刘磊,宋永明(57)
基于循环流化床锅炉床料流态的水冷壁磨损阶段寿命推算
张志仁,杨彤宇,陈爱国,等(61)
江苏仪征大仪 100MWp 农光互补发电项目研究
刘润宝,周宇昊,谢玉荣(67)

石化行业节能

- 石油开采企业节能检测与节能潜力分析
苗杨,孙春晓,徐嘉一(70)

冶金行业节能

- 基于静电喷雾的无锌花热镀锌冷却技术 杨谦(73)

事故与故障

- 某蒸汽锅炉爆炸事故原因分析及运行管理建议
栾泉(76)
某工业锅炉管外侧腐蚀问题分析
李文倩,孙健,于惠君(78)

Energy Conservation (Monthly)**Sponsor:** Liaoning Provincial Institute of Science and Technology Information**Publisher:** Energy Conservation Magazine Publishing House**Chief Editor:** DONG Yuanyuan**Address:** Lang Yue Street No. 2A, Hunnan District, Shenyang City, Liaoning Province, China**Post Code:** 110168**CONTENTS**

Mar. 2017 Vol. 36, No. 3 Total Issue No. 414

Progresses of theory and application for liquid fluid with drag reduction agentFENG Xiao-xiao, XIE Pei-lan, DAI Xiao-dong, et al
(Shengli College, China University of petroleum, Dongying 257061, China)

Abstract: Our country is energy consumption power, but in response to this basic national policy of energy conservation and emissions reduction and meet the requirement of increasing productivity, it is necessary to control energy consumption energy saving measures. And the characteristic of the economic efficiency of drag reduction agent just can meet the demand of energy saving, this paper describes fluid and subtract retarder is widely used in energy conservation and emissions reduction. First describe the liquid fluid drag reduction mechanism, including the development of the hypothesis, and then the air condition system, such as temperature, mass fraction, the mixture of drag reduction agent, and application are discussed, and then drag reduction from the oil and gas, salt, metal ions, and synergistic agent, and application are discussed. Finally, the oil pipeline in the DRA, can effectively reduce the line friction loss, reduce the first station pressure, to ensure pipeline transportation safety, realize low cost, rapid, convenient operation, effectively reduce the energy consumption and increasing transportation purpose

Key words: liquid fluid; drag reduction agent; energy saving

4

University student's energy saving and emission reducing behavior research

—Based on Investigation in Universities of Heilongjiang Province

HE Wen-zhen, WANG Yu-wan, WANG Chun-lei, et al
(Northeast Forest University, Harbin 150040, China)

Abstract: Based on interviews and questionnaires, this study investigates the behavior of energy saving and emission reducing in 5 dimensions, which from saving water, saving electricity, saving food, participating in the activities of energy conservation and emission reduction, reusing materials, and surveys 600 college students in four universities in Heilongjiang province. Using SPSS22.0 statistical analysis software to analyze the data's entire and differential situations, the results of the study are found following. Then, on the basis of the results, we analyze and put forward relevant countermeasures.

Key words: university students; energy conservation and emission reduction; behavior of energy conservation

12

Optimal design of the water supply mode in plant area based on PLC

XIA Ming, CUI Dao-ping

(Chuzhou Cigarette Factory, China Tobacco Anhui Industrial Co. Ltd., Chuzhou 239000, China)

Abstract: In order to improve the automatic control level of water supply and reduce the power consumption in cigarette enterprises, this design was based on the PLC control technology, using the platform of Energy Management System and configuration technology, which optimized the water supply mode in plant area. And it realized functions of the real-time monitoring of water supply conditions, the automatic switching of water mode between municipal pipe network and booster pump system, working days setting and alarm, etc. It not only to improve the management efficiency of water supply and reduce the loss of water supply equipment, but also to provide a guarantee for the stability and safety of water supply, and provide a basis and reference for the engineering application of water supply in cigarette enterprises.

Key words: PLC; water supply mode; energy management system; energy conservation

31

Coil and the filler composite cross-flow cooling tower thermal performance analysis

JIA Xiang-qin, LU Yan-fei

(Henan civil air defense construction design and research institute Co. Ltd., Zhengzhou 450000, China)

Abstract: Filler are introduced to the layout of the coil composite cooling tower and forms the heat transfer process, within the scope of the $t = 20 \sim 40^\circ\text{C}$, application error rate not greater than 1% saturated air enthalpy value regression formula, packing area application of combined plate district average enthalpy potential method and differential equation and boundary conditions on the thermal properties of the composite column. Via analysis disk district spray water inlet temperature $tw1$ indicates $tw2$ (coil outlet temperature of the spray water), the application of packing increases the heat transfer temperature difference between inside and outside tube, the decrease of the usage of the metal plate, save cost has certain economic benefits.

Key words: airtight cooling tower; cross flow; packing material; coil; thermal performance

34

Research and application of denitration technology of flue gas from biomass CFB boiler

LI Lian-ming, LI Qiu-ping, YU Yan, XUE Jun

(Jiaxing New Jies Thermal Power Co. Ltd., Jiaxing 314016, China)

Abstract: Environmental protection has been recognized gradually, and the ultra-low emission of boiler flue gas has been put into practice all over the country. Nitrogen oxides emissions from biomass direct combustion can not be ignored. Flue gas from biomass direct combustion CFB boiler has been characterized with low temperature, high content of alkali metal and fly ash, which are problems to perplex the SCR denitration process. Studies of SCR catalyst, reactor design, denitration system integration optimization and intelligent management are carried on. The final results are applied in a 130t/h High-temperature and High-pressure biomass fired CFB boiler. The practice shows that the SCR denitration system can control the NOx emission level below $50\text{mg}/\text{m}^3$, the denitration efficiency is higher than 80%, and the ammonia escape concentration is lower than $2.3\text{mg}/\text{m}^3$, which meets the requirements of ultra-low emission.

Key words: biomass; denitration; Ultra-low emission

47