ISSN1004-7948
CN21-1115/TK

节能

ENERGY CONSERVATION

2
2017
第 36 卷 第02期（总第 413 期）

层燃锅炉第九代实用节能技术

——混煤分层一体机、混煤器

图2、在链条锅炉上的应用

图3、在往复炉排锅炉上的应用

1. 适用所有带煤仓的各类层燃锅炉，包括正转链条锅炉及往复炉排锅炉，是解决炉排上两侧块多中部面多、尾部断火线不齐整(呈燕尾状)的神器。
2. “混煤分层一体机”（专利号2017200703449）兼有混煤器及分层燃烧装置的全部功能，新建设锅炉改以前分别采购混煤器、分层燃烧装置两台设备为现今只采购一台，一次性投资大大减少。
3. “混煤分层一体机”（见图1）特别适用原分层燃烧装置使用年限较久、技术落后、损坏严重、节煤效果不明显等急需更换新分层燃烧装置的锅炉。
4. “混煤器”（见图2、图3）特别适用原分层燃烧装置使用年限较短、分层效果尚可但炉排两侧块多中部面多的锅炉；
5. “混煤分层一体机”及“混煤器”都非常适用煤仓内经常发生燃煤严重粘结和棚堵的锅炉。
6. 选用“混煤分层一体机”之后，可节煤5%~20%。如果锅炉在80%以上负荷连续、稳定运行，投资回收期最多不超过100天，60t/h以上锅炉不超过50天。（详情请见本刊第62页文章）

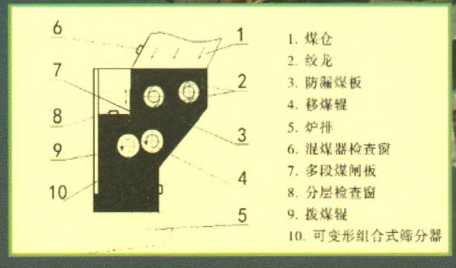

图1、混煤分层一体机结构示意图

一直被模仿 从未被超越

沈阳市建功能源技术研究所
地址：沈阳市沈河区北站路146号 电话：024-82511155 82511177 86285091
http://www.jangong.com.cn E-mail：jiangong666888@163.com

ISSN 1004-7948
02>

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 2 期（总第 412 期）
2017 年 2 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
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

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

Feb. 2017 Vol. 36, No. 2 Total Issue No. 413

Energy saving strategy about fresh air supply of process air conditioning system for cigarette making

WANG Shou-qiang, GAO Xian-jun
(Golden Leaf Production Center Henan Tobacco Co. Ltd., Zhengzhou 450000, China)

Abstract: By analysis the cooling load of cigarette production workshop, in addition factual dates, which collected by energy management system about process air conditioning, show that cigarette workshop need cooling throughout most of the year. Theoretical analysis and calculation indicates, central air-conditioning energy consumption there is a huge difference, compared with three cooling methods: fresh air, cold water and atomized water humidification. With adjusting the opening of fresh air valve, air-conditioning energy consumption has significant change. Therefore, process air conditioning for cigarette making should stick to energy-saving operation strategy that meet the minimum new atmosphere requirements, which can primly guide economical operation of constant temperature and humidity process air conditioning north area of Yangtse River.

Key words: cigarette making; process air conditioning; fresh air supply; energy-saving

Energy saving design and study on shipboard air-conditioning system

LIU En-hai, JIANG Yuan-yuan, PAN Jia-xin, et al
(School of Energy and Environment, Zhongyuan University of Technology, Zhengzhou 450007, China)

Abstract: Combining with heating, ventilation and air-conditioning design norms (GB50736-2012), it describes the design of 16500t shipboard air-conditioning system for a ship in Zhejiang Province, and puts forward the design scheme of using refrigeration compressor and winter auxiliary steam heating and humidifying device in summer. The design technical parameters of the air-conditioning system and the calculation of load, equipment selection, air volume calculation and duct system design and so on. The results show that the rational selection of shipboard air-conditioning system is very important to realize the system energy saving and reduce the thermal environment, which is very important to the environmental protection of ships running in various parts of the world, the requirements of ship navigation to air-conditioning system operation and the optimization design of the air-conditioning system, the adjustment movement and so on has certain reference value.

Key words: shipbuilding industry; air-conditioning system; design; energy consumption

Research on reducing the power consumption of induced draft fan in a 660MW thermal power plants

GUAN Xiao-guang, CHENG Hao-ming
(Dandong Jinshan thermal power Co. Ltd., Dandong 118011, China)

Abstract: Through a systematic analysis of the cause for the large power consumption of induced draft fan, it found the main impact factors of the induced draft fan power consumption from two aspects of personnel and operation factors to analysis the causes. Then formulate particular measures, at the same time, collected data and analysis. For the quantitative analysis of power consumption influence factors of induced draft fan can check effect analysis. Through the reasonable adjustment of operation mode, arrangement of steam blowing, controlling SCR inlet well and air preheater outlet smoke temperature, without new equipment investment and costs, on the premise of guarantee the safety and stability, dramatically improve the safe and economic performance of generating units, has obtained the remarkable effect.

Key words: induced draft fan; energy consumption; energy saving

Pollutant emission control technology research of Tangshan firing coal utility boilers

QI Xue-jing, LIU Jing-xin, LIU Dan-yang, et al
(Tangshan Institute of Special Equipment Inspection, Tangshan 063000, China)

Abstract: China is the largest country in the coal consumption in the world, coal caused by environmental pollution is very serious, especially, ? SO2 and NOx in coal-fired flue gas dust and smoke dust to atmosphere has become a problem that nots allow to ignore. Through the analysis of the summary of pollutant emission control technology of tangshan firing coal utility boilers, Pollution control technology have different characteristics, So, for enterprises to choose more environmental and economical of power plant boiler emissions control technology to provide the reference basis.

Key words: utility boiler; pollutant emission; control technology

The effective utilization of hot waste water in the oil fields with absorption heat pump

ZHANG Xing, CHEN Yang-yang, YAN Han, et al
(China University of Petroleum Energy and Power Engineering, Qingdao 266000, China)

Abstract: In order to utilize hot waste water associated with the oil well reasonably, the absorption heat pump is applied into oil fields in order to recycle the heat in this paper. In this paper, the hot waste water in oil fields acts as the driving force of absorption heat pump and factors that affect COP of absorption pump are discussed by programming with Matlab software. By applying pinch analysis into the research of absorption heat pump, the optimization suggestions about fluid's heat exchange within the heat pump system can be drawn to improve the work efficiency of heat pump and its environmental benefits.

Key words: absorption heat pump; design calculation; pinch analysis; the heat network optimization

Analysis of heat-pipe property under condition of room temperature

ZHAO Tian-yu, TENG Hai-peng, ZHAO Yang, et al
(Institute for Energy Transmission Technology & Application, School of Chemical Eng., Northwest University, Xi'an 710069, China)

Abstract: The heat exchanger with heat pipe as the heat transfer element is a new type of heat transfer elements with high heat transfer efficiency, compact structure, small loss of fluid, and good controlling property of dew point corrosion. With the advancement of science and technology, the application range of heat pipe has been extended from temperature control for spacecraft to various other fields of industrial technology. In this paper, the heat pipe heat transfer principle is applied to the heat transfer of wind energy heating technology. The purpose of the heat pipe is to explore the possibility of application of heat pipe technology in wind energy heat transfer, so as to obtain basic data of heat transfer for wind energy induced heat, and provide the fundamental for the practical application. The thermal conductivity of the heat pipe at different water storage capacities was detected and analyzed by experiments. The data were comparatively analyzed, thereafter the heat transfer of the heat pipe was analyzed, and the heat transfer laws of heat pipes were obtained. The experimental results show that the thermal conductivity of the heat pipe increases with the increase of the storage capacity, and the relationship is non-linear. This is of great significance to the practical application of heat pipe technology in the thermal energy transfer of wind energy.

Key words: heat pipe; heat transfer; thermal conductivity; water storage capacity

密闭式冷凝水回收技术
低位热力除氧技术

国家发改委“最佳节能实践”案例源企业
蒸汽热力系统节能技术设备专业服务公司

当热力系统领域里最好的医生

做热力系统领域里最佳的药品

是热力系统领域里最真的伙伴

服务范围：

- 密闭式高温冷凝水回收成套装置
- 低位热力除氧器成套装置
- 工业乏汽回收与利用成套装置
- 锅炉自动排污成套装置
- 蒸汽喷射热泵系列
- 高效节能疏水阀系列
- 热力系统诊断、评估及优化集成

○十五年的技术实践经验，近四百家的应用客户业绩，节能率15%～30%，投资回收期3～6个月

○全国十几家代理机构、7个办事处，组成快捷、周到的销售及服务网络

○可按世行“合同能源管理”模式进行项目操作

○专利证书号：ZL93213495.5

单位名称：大连汇能科技股份有限公司

地　　址：大连市软件园路80号大连理工大学科技园大厦B座301室

联 系 人：徐昶斗　　邮　　编：116023

电　　话：0411-84890011　84890033　　传　　真：0411-84890022

http://www.dl-hn.com　　E-mail：xcd8489@163.com

邮发代号：8-150　广告经营许可证号：2101001500026　定价：每期10.00元