

节能

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2014

ENERGY CONSERVATION

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链条锅炉第八代分层燃烧技术——

一种产品兼具混煤器和分层燃烧装置两种功能——



SFFFG型

三辊式分层分行分段给煤装置



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MHJ—8061型智能煤耗计

1. 三辊式结构 (专利号972182721), 湿煤不粘、冻煤不棚、干煤不自流, 任何煤质条件下下煤都均匀流畅。
2. 配“可变形组合式筛分器” (专利号2006200904651), 可根据不同煤质, 在“分层燃烧”与“分行燃烧”之间任意切换, 具备适应煤种变换的能力。
3. 根据锅炉吨位煤闸板按3~12段布置, 可以对局部煤层厚度 (风阻) 做单独调整。
4. “可变形组合式筛分器”与“多段煤闸板”配合应用, 均匀煤层风阻使燃煤充分燃烧的效果, 完全超越混煤器。不仅一机双能, 而且价格公允、安全可靠。
5. 配MHJ—8061型“智能煤耗计”, 实现单炉、单位时间煤耗量的显示、打印和数据输出。
6. 较普通煤斗相比, 平均节煤5%~10%, 投资回收期50个连续运行日之内; 较混煤器及早期分层煤斗相比, 平均节煤2%~5%, 投资回收期100个连续运行日之内。

一直被模仿 从未被超越

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Building energy consumption monitoring platform construction and implement technology research

LI N Zhi-ming, HUANG Xing, ZHANG Ke

(Guangzhou Kechuang Energy-saving Technology Service Co. Ltd., Guangzhou 510070, China)

Abstract: A detailed analysis about the present situation of building energy consumption in our country is proposed, which introduces the general situation of building energy consumption monitoring both at home and abroad on the basis of the view of the lack of effective building energy consumption statistics in China, and combined with the application of building energy consumption monitoring system at home and abroad. The research and development, the purpose of building energy consumption monitoring platform specific introduction to the structure of energy consumption monitoring platform, hardware and software system structure, function, etc. are expounded, and successfully applied to the specific project. Application of building energy consumption monitoring platform can get real-time energy consumption data, help to further analyze these data, in order to better develop energy-saving retrofit scheme.

Key words: building energy consumption; energy monitoring platform; energy-saving

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Biomass power generation industry in our county present situation and development suggestions

WANG Kan-hong, LUO Jing-hui, LIU Huan, et al

(Hebei university of engineering, Handan 056038, China)

Abstract: The general situation of biomass power generation in China is introduced, the difference between biomass power generation in China and abroad is found through the comparative analysis about the present situation of biomass power generation at home and abroad. Then the scientific and reasonable solution are proposed. Scientific solution to these problems will promote the scientific development of biomass power generation in China, maximize play to increase the income of farmers, improve the environment, and has very important realistic significance.

Key words: biomass; energy-saving; bio-electrogenesis

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A summary evaluation of the ecological environment

NIU Jia, WANG Ji-gang, YANG Ming-shen, et al

(Liaoning Urban Construction Technical College, Shenyang 110010, China)

Abstract: Evaluation of ecological environment is an important substance of the ecology of pollutant prevention and control. The domestic and international investigations about this field are gradually deepening. Many methods of evaluation have been proposed. Evaluation

models and index systems are extensively building up. Quantitative researches of environmental evaluation for specific area or city has been carried out. And the conclusion of evaluation for it was given. However, since there is no reliable and accurate methods of metrics of environment evaluation, the further development of the investigations are limited. Consequently, the investigations in the literature will be reviewed primarily, followed by possibility analysis of the development direction of environment evaluation.

Key words: ecological; environmental assessment; evaluation model; index system; review

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Industry development and carbon dioxide mitigation of ceramic in China

LIU Hai-yan, ZHENG Shuang

(National Center for Climate Change Strategy and International Cooperation of China, Beijing 100038, China)

Abstract: The developing situation of ceramic industry in China is discussed, and its energy consumption and main energy-consuming processes are analyzed. Based on these studies, it identified the major emission sources and made some suggestions on technical measures to reduce carbon dioxide.

Key words: ceramics industrial; carbon dioxide; emissions reduction

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Analysis of heating charge in Liaoyang area

WANG Li, LI Jing-yong

(Liaoning Technical College of Construction, Liaoyang 111000, China)

Abstract: The recent 3 years heating status from 3 heating company locate in a Northern city are analyzed as typical cases; a comprehensive research is carried out through from the analysis of heating costs, heat metering pricing as well as the feasibility of heat metering charge, which proves the two-part heating charge system is important for construction energy saving, heating commercialization and heating system innovation.

Key words: heating costs; fixed heating price; heat metering pricing; two-part heating charge

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Numerical simulation of air distribution in air-conditioned room

YANG Su, CHU Guang-ming, LU Guang-lin

(ShanDong JianZhu University, Jifan 250101, China)

Abstract: The main objective of this article is to investigate the difference in velocity field, temperature field and indoor CO₂ concentration distribution in a room based on the software of FLUENT when one air-conditioned room is subject to the displacement ventilation method and mixed ventilation method. The results show that the displacement ventilation method is better than mixed ventilation method in improve thermal comfort, indoor air quality and energy-saving.

Key words: air supply method; thermal comfort; energy-saving

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Uncertainty analysis in counter balance thermal efficiency testing for industrial boiler

HU Yu-long, LIU Jian-jiang, QIANG Jun-gang, et al

(Inner Mongolia Boiler And Pressure Vessel Inspection And Research Institute, Hohhot 010020, China)

Abstract: Studied the uncertainty evaluation method in counter balance thermal efficiency testing for coal-fired industrial boiler, include the analysis process, calculation formula, instrument selection, data

process, determination of deviation limits and the calculation of normal combined uncertainty and extended uncertainty. The example evaluation uncertainty in counter balance testing for coal-fired industrial boiler illustrates various affecting factors and comparison with the positive balance test, points out that sampling uncertainty of cinder and fly ash in grate-fired furnace is prominent, therefore positive balance testing should be adopted because of large uncertainty in counter balance testing, on the contrary, counter balance method should be used for chamber combustion boiler.

Key words: industrial boiler; counter balance; thermal efficiency; uncertainty; analysis

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Identification and research on energy-saving bottlenecks for industrial boiler system
XU Ran, WEI Xiao-guang, WEN Zhi-xiang
(Shaanxi Institute of Boiler and Pressure Vessel Inspection, Xi'an 710048, China)

Abstract: The energy-saving reform bottlenecks for a coal-fired industrial boiler using system theory is analyzed. Through the technical documents review and boiler thermal efficiency test, it shows that the energy-saving bottlenecks of the boiler are exhaust gas temperature, excess air coefficient and ash combustible content. Setting the matching economizer, adopting layered coal distribution technology and automatic control system to solve the bottlenecks, this makes the boiler thermal efficiency is increased from 53.89% to 77.26%.

Key words: industrial boiler; energy-saving; bottleneck

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Energy-saving analysis of metro vehicle inverter air conditioner
LI Rui-zhen

(Guangzhou Zhongche Railway Vehicles Equipment Joint-stock Co. Ltd., Guangzhou 510285, China)

Abstract: Based on the Guangzhou metro line vehicle inverter air conditioning units simulation running indoor and the Shenzhen Metro Line vehicle inverter air conditioning units running the actual loading of energy-saving comparison test, the metro vehicle inverter air conditioner energy efficiency is reached. Through analysis of the two tests results, the conclusions of metro vehicle inverter air conditioner have energy efficiency and comfort.

Key words: metro vehicles; inverter air conditioner; energy-saving

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Power plant boiler steam blowing system optimization
GAO Xin-xin, LIANG Shuang-yin
(North China Electric Power University, Beijing 102206, China)

Abstract: At present large boiler ash mostly adopts steam blowing method, blowing steam source mostly adopts high quality steam, the steam pressure is higher, the some issues which affect the safety and e-

conomic behavior of unit operation are growing, and they reduces the efficiency of the unit, therefore, some improving measures to reduce the loss of high quality steam should be sought and improve the utilization rate of steam unit. In view of the present problems that king of power plant steam blowing system of high quality steam waste, this article puts forward to reheat steam source as a means of steam blowing steam source and analyzed, the results show that efficiency that we adopt reheat steam blowing steam source is very obvious.

Key words: blowing system; steam source transformation; reheat steam; efficiency

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Study of energy consumption prediction model of universities building in Fujian Province
FANG Gui-chun, CHEN Xiao-yan
(Logistics Management of Fujian agriculture and forestry university, Fuzhou 350002, China)

Abstract: On the basis of university building energy analysis in Fujian Province, a comprehensive index as the basis of classification of building is constructed. Take the total energy consumption of the building as the dependent variable, type of construction, completion time, the construction area, the number of layers, the number of permanent, air-conditioning and lighting area of power seven indicators as the independent variables, using multiple linear regression method, establish the energy forecasting model after classify the samples. Model predicted value can better fit the actual value, so the model has practical value.

Key words: university; building; energy consumption; prediction model

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Influence of public building environmental factors on the thermal comfort
ZHAO Shan-feng
(Xian Yang Urban Planning & Design Institute, Xianyang 712000, China)

Abstract: Use thermal comfort data logge to test the indoor PMV index, room temperature and relative humidity in public building. Analyze the difference of this effecting factors on thermal comfort of people. The paper provides the basis and measure to serve saving energy policy, and improving the comfort of people in summer. The results show that room temperature is the main factor that effect on thermal comfort of people. In relative humidity 60%, when room temperature rise 1℃, the PMV value increase 0.3 approximately. In 26℃ room temperature, when relative humidity increase 10%, the PMV value increase 0.1 approximately. Relative humidity has a little effect on thermal comfort of people in summer.

Key words: public building; thermal comfort; the PMV value; room temperature; relative humidity

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