

节能

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链条锅炉第七代分层燃烧技术——



SFFFG型

三辊式分层分行分段

给煤装置

130t/h单炉排分层分行分段给煤装置



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, 任何煤质条件下供煤都流畅均匀。
2. 配“可变形组合式筛分器” (专利号2006200904651), 可根据煤质状况, 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. 煤闸板根据锅炉吨位按3~12段布置, 可以对局部煤层厚度 (风阻) 做单独调节。
4. 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。
5. 较普通煤斗相比, 平均节煤5%~10%, 投资回收期两个连续运行月之内; 较早期分层煤斗相比, 平均节煤2%~5%, 投资回收期四个连续运行月之内 (详情请见本刊第58页文章)。

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万方数据

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the newest filed in the development of lithium-ion batteries. Thin film anodes are the important parts of the thin film lithium-ion batteries and the focus of the research. The recent progress in the thin film anode materials is reviewed, including silicon anode materials, metal or alloy membrane materials, oxide thin film materials and composite film materials. The prospects are also presented in this paper.

Key words: lithium-ion batteries; anode materials; thin films

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The basic problem of liquid desiccant
ZHANG Jie, GENG Xin, BAI Xu-dong
(School of Urban Construction, Hebei University of Engineering, Handan 056038, China)

Abstract: Analysis research status of liquid desiccant. Summarizes the basic problem of liquid desiccant, including the principle of liquid desiccant dehumidification / regeneration, the mechanism of energy storage, the effects of liquid desiccant on air quality, and the selection of desiccant and dehumidifier. Some problems and development prospect of liquid desiccant are proposed.

Key words: liquid desiccant; regeneration; energy storage; desiccant; dehumidifier

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A new control method for cooling wind speed in brake dynamometer
LIANG Liang, HU Wei, LIU Da-xin, et al
(College of Communication Engineering, Jilin University, Changchun 130022, China)

Abstract: Dynamometer is the major test equipment for vehicle brake. With the brake dynamometer, the controlling of wind speed is difficult to be precise, and there are a lot of interference signals. New methods to solve this problem use the serial port communication and the arithmetic of digital PID.

Key words: dynamometer; control for wind speed; digital PID

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Fault diagnosis of transformer based on genetic algorithm optimization-based support vector machine
ZHANG Chun-long, WU Nan, WANG Tao, et al
(School of Automation Engineering, Northeast Dianli University, Jilin 132012, China)

Abstract: Aiming at the problems that the fault diagnosis of the transformer appear fault classification, in order to improve the Support Vector Machine (SVM) fault classification accuracy, the Genetic Algorithm (GA) to optimize the parameters of SVM is utilized. Finally, the Genetic Algorithm to optimize the Support Vector Machine (GA-SVM) algorithm is applied to the fault diagnosis of transformer, and compared with the PSO algorithm to optimize the Support Vector Machine (GA-SVM) algorithm identification results. The results show that GA-SVM algorithm can obtain better classification result than the PSO-SVM algorithm, which has a significant guidance on the fault diagnosis of transformer.

Key words: support vector machines; genetic algorithm; parameter optimization; transformer; fault diagnosis

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Variable frequency speed control technology in the application of belt transportation system
LIU Ji-xing
(Laigang Automation Department of Shandong Iron and Steel Group, Laiwu 271104, China)

Abstract: In order to raise the efficiency of transporting coke belt machine, through the acquisition of belt weigher signals provided by the belt machine, using the inverter for speed control, to achieve energy transfor-

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Application of ultrasonic wave in excess sludge treatment
YOU Mei-yan, CHEN Chuan-zheng, LUO Wu-hui, et al
(School of Mechanical Engineering and Automation, Northeastern University, Shenyang 110004, China)

Abstract: The large amount of excess sludge which was generated in the wastewater treatment process is with high moisture content and contains a lot of micro-organisms and pathogens, so treatment and disposal of excess sludge is required accordingly. Ultrasonic excess sludge treatment technology, with simple equipment and fast performance but without secondary contamination, has been focused more and more deeply home and abroad. So the application of ultrasonic wave in the excess sludge treatment was reviewed. The mechanism of ultrasonic treatment was introduced briefly, that is, the sludge was treated mainly by the strong shear force which generated by the water injection of ultrasonic cavitation effect. And the dewater performance of the treated sludge by ultrasonic wave could be promoted, because a sponge effect could be produced by ultrasonic wave, which made water molecules transfer through the wave surface channel much more easily. So the water inside the zoogloea was released after the zoogloea was destroyed by the ultrasonic wave. Furthermore, the digestion performance of the ultrasonically treated water was promoted as well, so the sludge fermentation time could be decreased and the yield of the methane could be increased, and ultrasound can crack the sludge to the study situation.

Key words: ultrasonic wave; sludge dewatering; sludge disintegration; sludge digestion

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The potential analysis on biologic materials used as building insulation materials in China
YANG Xiu-fei, LUO Qing-hai, YANG Hui-juan, et al
(School of Urban Construction, University of South China, Hengyang 421001, China)

Abstract: Describes the current situation and existing problems of the biomass materials in our country, and comprehensively analyses the application potential on the biomass materials. Through the analysis of existing problems and great application potential, it's feasible to apply biomass materials to building insulation materials. Combining with the present domestic technology, some constructive prospect is proposed.

Key words: biologic materials; building insulation materials; potential

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Research progress in lithium ion battery anode material in thin film
YIN Yan-qun, GAO Hong
(School of Environment and Chemistry Engineering, Shenyang Ligong University, Shenyang 110159, China)

Abstract: All- solid-state thin film lithium-ion batteries have become

mation. The results show that using variable frequency to speed control can improve belt machine efficiency, save energy, reduce the production cost and raise economic benefits.

Key words: belt conveyer; control signal; variable frequency speed regulation

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Application analysis of low-temperature waste heat utilization technology in thermal power plant
HE Xiao-Hong, SHU Bin
(China Huadian Electric Research Institute, Hangzhou 310030, China)

Abstract: A brief introduction and contrast analysis of different low-temperature waste heat utilization technologies in thermal power plant are presented and summarized. The centralized absorption heat pump technology has a wide range of application and good prospects. The waste heat application project in Huadian Weihuliang power plant is the first engineering application in 125MW class water-cooled power units of China, which has significant effect on energy saving. It can save standard coal 41688 tons and cooling water 658800 tons annually.

Key words: thermal power plant; low-temperature waste heat; absorption heat pump; energy saving

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The influence factors of boiler combustion and its adjustment
CAI Ran

(Shenyang Hunrun Pumpary Limited, Shenyang 110043, China)

Abstract: Expounds the boiler combustion adjustment task and purpose, analysis the influence factors of combustion and strengthen the burning measures and different coal combustion adjustment principle. according to the boiler combustion adjustment proposed deep discussion and research, are proposed to improve the boiler safety and economic operation to provide reference and reference.

Key words: boiler; combustion; air; adjustment; energy saving

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Energy saving analysis of a hotel air conditioning system
SUN Yan, CHU Guang-ming, YUAN Meng-meng
(School of Thermal Engineering, Shandong Jianzhu University, Jinan 250101, China)

Abstract: A reconstruction project of an air-conditioning system is analyzed for its energy-saving, which is in a star hotel of Jinan. Furthermore, the necessity of a longer life, larger building energy consumption of existing buildings air conditioning system for energy saving is discussed. The design features of the hotel's air-conditioning system, device configuration, and decoration of co-ordination, etc are researched, as well as an economic comparison of the old and new air conditioning program. From the above analyses, the transformation of better economic and energy-saving air-conditioning system can provide a reference for the same type hotels.

Key words: star hotel; energy-saving transformation; air conditioning program; economy

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Integrated air conditioning system energy saving design in a casting factory
TAO Luo-Fei, TU Shu-Ping
(Shanghai Maritime University, Shanghai 201306, China)

Abstract: Based on the integrated air conditioning system design and control system design in a casting factory, the air conditioning energy-saving measures in the system from the natural cooling, chilled water energy level, post air-conditioning technology and frequency control are proposed.

Key words: air conditioning; natural cooling; chilled water energy level; frequency control

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Research on energy-saving result of the waste caustic combustion burner's automatic control system
LI Shu-gen
(Cyclohexanone Division of Baling Petrochemical Branch, Yueyang 414014, China)

Abstract: A automatic control system of the combustor is designed to the hearth construction characteristics and combustion state of the waste caustic combustion. And proceed ration grouping control to the burner. The control circuit diagram and program process diagram are proposed in this paper. The energy-saving results are analyzed.

Key words: waste caustic combustion; combustor; automatic control system; energy-saving

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TP316L stainless steel pipe in the use of water chiller condenser
ZANG Dian-rong
(Shandong Guangming Heat & Power Co. Ltd., Taian 271221, China)

Abstract: With the increasing scarcity of water resources, water use for industrial water use has opened up another path. But the water is conovise to the condenser brass. So the condenser frequent occurrence leak. Alternative to copper tube through the use of TP316L stainless steel tube, and make the installation and operation and maintenance of stainless steel pipe. The water in the condenser tube corrosion problems are solved to ensure that the condenser safe operation.

Key words: stainless steel tube; condenser; in water; corrosion; installation; operation and maintenance

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