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The quantitative methodology for greenhouse gas reduction for the project of utilization of industrial waste heat
CHANG Ming-gang, WANG Kan-hong, LUO Jing-hui, et al
(Hebei University Of Engineering, Handan 056038, China)

Abstract: Introduced and simplified analyzed the voluntary emissions reduction methodology CM - 005 - v01, and quantitatively evaluated the greenhouse gas emissions in a certain chemical waste heat utilization project by using this methodology. It is concluded that industrial waste heat comprehensive utilization will have great effect for energy saving and emission reduction. Also provided guidance and methodology reference for quantitative evaluation of carbon emission reduction for waste energy comprehensive utilization project.

Key words: industrial waste heat; greenhouse gases; carbon emission reduction; methodology

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Research on energy saving audit mechanism
LIANG Sen-sen, SHEN Zhao-ren, FAN Li-ming
(Nanjing Energy Conservation Center, Nanjing 210007, China)

Abstract: In recent years, China has basically formed a set of energy saving audit procedures and methods. But the defects of audit work are gradually revealed. On the basis of current status of audit work, this study make suggestion on the audit policy, the audit process, audit methods, the audit agency and other issues, to improve energy savings audit mechanisms and promote energy savings audit normative conduct.

Key words: energy-saving; audit; mechanism; agency; suggestion

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The ordinary energy-saving technology application of energy performance contracting
ZHANG Liang
(SGS-CSTC Standards Technical Services (Shanghai) Co. Ltd., Shanghai 200233, China)

Abstract: The mode of energy-saving performance contract (EPC) is an accepted market-oriented mechanism. From the aspects of central air-conditioning system, boiler system, green lighting, renewable energy, industrial waste heating recovery, and factory power supply system, introduces the ordinary energy-saving retrofit technology application, which are with a fast payback and applied in EPC project implementation, and it will be a great significance to sustainable development and ecological civilization construction.

Key words: industrial architecture; energy performance contracting; retrofit; energy-saving

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Reduce power consumption of cooling water system
WANG Hui, HUANG Yi-song, WANG Chang-lin
(Zhuhai Cellulose Fiber Co. Ltd., Zhuhai 519070, China)

Abstract: Research the cooling water system in the plant, find out the energy waste point by working on the running status of water using equipment. Strengthen the operating habits as water saving, decrease the quantity of cooling water, then have chance to turn off excess motor, realize the power saving without any investment. This article also evaluates the risk of turning off the excess motor, then form and implements countermeasures according to the evaluation result. This article introduces an instance which saves energy of cooling water system by change operating habits. That will have certain significance to energy saving work in the plant.

Key words: cooling water; energy-saving; power consumption; energy waste

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Orthogonal experiment and analysis on combustion mechanism of corn straw briquette
LIU Peng, SHEN Xiao-zhen, LV Kai
(University for Science & Technology Zhengzhou, Zhengzhou 450064, China)

Abstract: The orthogonal experiment, which includes 3 factors and 3 levels, is designed to determine the effects of reaction temperature, air supply and relative porosity to the combustion of formed corn stalk fuel. The experiment is done through the combustion test-bed of formed corn stalk fuel. The experiment results show that reaction temperature is the most remarkable factor, then is the air supply and relative porosity is not so important compared to the former two factors.

Key words: formed fuel; corn stalk; combustion; orthogonal analysis

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Economic analysis of CCHP used in industrial garden
GAO Zhi-yong
(Tianjin Gas Heat planning & Design Institute, Tianjin 300191, China)

Abstract: Depending on the requirement of energy in industrial garden, this paper created two CCHP programs and a traditional power supply program. Analysis the economy of the three programs from the initial investment, operation cost and payback period three aspects, in order to draw a reasonable power program scheme for industrial garden.

Key words: industrial garden; CCHP; economy

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Numerical simulation of water side in condenser of 600MW power station
LIN Yi, AN Ke
(Xi'an Thermal Power Research Institute Co. Ltd., Xi'an 710032, China)

Abstract: The condenser water flow field of the 600MW power station is simulated, to study fluid flow conditions. Simulation results show that the before of the condenser water, the vortices increase the flow resistance of the fluid, aggravate flow conditions, affecting the operation of the equipment's safety and economy. Therefore, it is necessary to take suitable measures to alleviate the influence of flow deflection on the condenser. The computation results are helpful to reasonable design of power plant condensers.

Key words: condenser; water chamber; numerical simulation; vortices

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Arcade building energy research in envelope in hot summer and cold winter area

YU Feng, GONG Yan-feng

(College of Urban Construction and Safety Engineering
Nanjing University of Technology, Nanjing 210000, China)

Abstract: Dest building environment simulation tool to a department store in Nanjing as the prototype, simulation calculations. Explore the research envelope heat transfer coefficient K value changes on the mall cooling and heating load, air-conditioning running time. The results in Table Mingxia hot and cold winter area mall building envelope heat transfer coefficient smaller the K value is not saving, but the existence of an equilibrium point in winter and summer, that envelope K values are as follows: Roof, $0.8 - 0.6 \text{ W}/(\text{m}^2 \cdot \text{K})$; wall, $1.0 - 0.7 \text{ W}/(\text{m}^2 \cdot \text{K})$; windows, $3.0 - 2.5 \text{ W}/(\text{m}^2 \cdot \text{K})$.

Key words: arcade building; envelope; cooling and heating load; air conditioning running time; energy conservation

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The characteristics of aerosol cooling technology of normalizing furnaces for silicon steel

LIU Guo-dong

(Engineering Business Unit, WISDRI (Wuhan) WIS
Industrial Furnace Co. Ltd., Wuhan 430223, China)

Abstract: The normalizing rapid cooling is a indispensable process to high grade non-oriented silicon steel and high magnetic induction oriented silicon steel's production. The fog cooling is a key ways of coming true the normalizing rapid cooling. This paper introduces the technical features of the fog cooling system in normalizing pickling line which is the domestic independent design and construction. Meanwhile, the fog cooling system's characteristic is analyzed systematcially. In the end, this paper proposes several notes to this fog cooling system in design and selection of operating parameter which will guide the fog cooling system's design and use.

Key words: silicon steel; normalizing furnace; aerosol cooling; technical characteristics

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Organic heat carrier boiler of light system reform practice and analysis

YIN Xue-jun, ZHANG Jian-hua

(Nantong baosteel steel co. Ltd., Nantong 226001, China)

Abstract: Combining with in 1320kW of organic heat carrier boiler renovation project in nantong baosteel steel co. Ltd., light of organic heat carrier boiler exhaust system reform has made the preliminary analysis and discussion. For all kinds of organic heat carrier boiler exhaust light project has great reference value, can be used as reference for similar engineering.

Key words: organic heat carrier boiler; light system; safety; energy-saving

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Large-scale coal chemical projects thermal power plant boiler ignition mode selection

TENG Hong-sheng

(Shenhua Baotou Coal Chemical Co. Ltd.,
Baotou 014010, China)

Abstract: Shenhua Baotou Coal Chemical Co., 4[#] boilers with steam plasma torch ignition, the full realization of the goal of zero fuel consumption, and in the meantime all the equipment is operating normally. In this paper, take 4[#] boiler for example, explained the feasibility and necessity of large-scale thermal power plant boiler coal chemical projects choose the way of plasma ignition. Meanwhile, in order to solve the shortage of plasma burner stable combustion performance issue, blended chemical plant boiler exhaust as the main combustion stabilization measures, lard gun as a backup fuel stabilization measures.

Key words: coal chemical thermal; power station; boiler; ignition mode; selection

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Design on horizontal solar air collector with inserted glass tubes

MA Guang-bai, REN Yong, FENG Zhong-yu, et al

(Shandong Linuo Paradigma Co. Ltd.,
Jinan 250103, China)

Abstract: Basic structure design and thermal performance of the Horizontal Solar Air Collector with inserted glass tubes was researched on this paper. Thermal performance of the collector was tested. The results show that it has excellent performance and more advantages in the field of solar heating and solar drying.

Key words: solar air collector; horizontal, inserted glass tubes; solar energy; thermal performance

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Introduction to energy-saving management and control of urban road lighting

LAI Chang-hua

(Shenzhen Lighting Environment Management Center,
Shenzhen 518036, China)

Abstract: Taking Shenzhen Nanshan Science Park LED street lamp intelligent control demonstration project for example, the main technology and development trend of urban road lighting control are analyzed. The results has reference value to intelligent managment of the road lighting.

Key words: road lighting; street lamp; energy-saving

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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，尤其价格公允安全可靠。
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