

全国中文核心期刊  
中国科技核心期刊

ISSN 1002-3364  
CN 61-1111 / TM  
CODEN RFEAC8

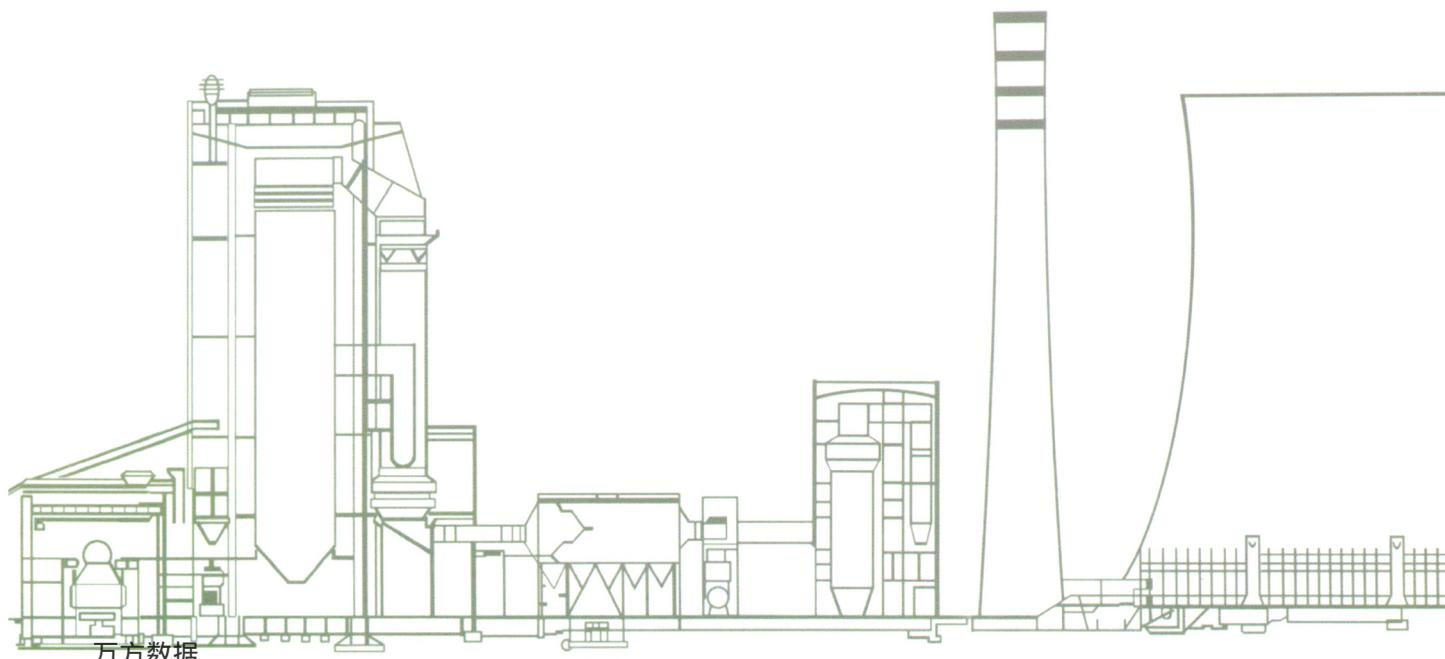
# TERMAL POWER GENERATION

# 热力发电

2016.10

总第359期  
1972年创刊  
第45卷

■ 主办：西安热工研究院有限公司 中国电机工程学会



万方数据

## CONTENTS

### 目 次

#### 技术经济综述

- 01 风力发电机状态监测与故障诊断技术综述//赵 勇,韩 斌,房刚利  
06 汽轮机汽封改造经济性分析//丁常富,李尊平,刘志博

#### 热能科学 研究

- 10 可循环磁珠脱除燃煤烟气中单质汞的性能与工艺路线研究//张 翼,杨建平,赵永椿,张军营,郑楚光  
16 燃气预热温度对燃气-蒸汽联合循环性能影响//付忠广,王霄楠,卢 可,张 辉  
23 凹槽带肋叶顶气膜冷却特性数值模拟//李广超,张占东,张 魏,寇志海,赵国昌  
29 660 MW 燃煤机组 PM<sub>2.5</sub>生成与排放特性//盘思伟,张 凯,张 宇,徐义书,刘小伟,徐明厚  
35 轴向间距对轴流风机失速流场特征影响//张 磊,袁 威,王松岭  
40 磨制方式和含氧量对掺烧特性影响实验及动力学分析//龚德鸿,张忠孝,朱 兵,钱 进  
50 高压富氧气氛下痕量元素排放形态研究//董静兰  
54 四角切圆锅炉在 O<sub>2</sub>/CO<sub>2</sub> 气氛下燃烧特性数值模拟  
//姬海民,徐党旗,李红智,赵治平,薛 宁,周 飞,聂剑平  
60 低浓度瓦斯与煤粉耦合体系着火温度实验研究//刘丽丽,崔永安,乔晓磊,徐 楼,樊保国,金 燕  
64 N<sub>2</sub>/CO<sub>2</sub> 气氛下含油污泥热解特性实验研究//周 雄,李 伟,柏继松,林顺洪,王 超,吕全伟  
70 新型顶部多喷嘴气流床气化炉热态数值模拟  
//唐 佳,王勤辉,孙永才,施正伦,吴 龙,刘振彪,周怀祖,杨守青

## 发电技术论坛

- 77 基于卡尔曼滤波的燃煤发热量动态软测量方法//郝晓辉,刘鑫屏,边防,张全  
82 超超临界机组锅炉储水罐调节阀内流场特性及优化  
//何庆中,刘佳,董学莲,郭斌,张城,陈玺,刘玉聪,刘怡  
89 配汽方式对调节级叶片-轮盘安全性的影响//常东锋,贾红金,江浩,谷伟伟  
94 汽轮机调节级特性曲线快速算法改进//李慧君,赵翔  
99 基于时域指标的火电机组负荷控制系统性能模糊综合评价//王印松,田婧雨,李士哲,苏杰  
104 波纹结构参数对搪瓷蓄热元件传热及流动特性的影响//高建强,危日光,杨相钊,张磊,顾兴鹏  
110 凝汽器管束布置系数数值模拟//张莉,曾申富,程浩然,韩成龙  
115 核电站稳压器压力及液位控制系统研究//武万强,吴婕,曾碧凡,许志斌,马晓茜

## 现场经验交流

- 121 火电机组 FCB 燃料快切方案研究//孙灵芳,郎坤,任渊  
127 低温省煤器与暖风器联合系统应用//张华东,张知翔,贾兆鹏,梁双轨,徐党旗,张广才,候逊

[期刊基本参数]CN61-1111/TM\*1972\*m\*A4\*132\*zh\*P\*¥16.00\*4500\*23\*2016-10

## THERMAL POWER GENERATION

### CONTENTS

#### Technical and economic review

- A survey of condition monitoring and fault diagnosis for wind power generators ..... ZHAO Yong, HAN Bin, FANG Gangli (1)  
Economic analysis of steam seal modification for a steam turbine unit ..... DING Changfu, LI Zunping, LIU Zhibo (6)

#### Thermal energy science research

- Mercury capture performance of recyclable magnetospheres catalyst for coal-fired flue gas and the process route study ..... ZHANG Yi, YANG Jianping, ZHAO Yongchun, ZHANG Junying, ZHENG Chuguang (10)  
Influence of preheating temperature of nature gas on performance of gas-stem combined cycle ..... FU Zhongguang, WANG Xiaonan, LU Ke, ZHANG Hui (16)  
Numerical simulation on cooling effectiveness of gas film on tip of blade with groove and fins ..... LI Guangchao, ZHANG Zhandong, ZHANG Wei, KOU Zhihai, ZHAO Guochang (23)  
Formation and emission characteristics of PM<sub>2.5</sub> in a 660 MW coal-fired unit ..... PAN Siwei, ZHANG Kai, ZHANG Yu, XU Yishu, LIU Xiaowei, XU Minghou (29)  
Characteristics of rotating stall in an axial-flow fan with different axial gaps ..... ZHANG Lei, YUAN Wei, WANG Songling (35)  
Effects of pulverizing method and oxygen content on combustion characteristics of mixed coal and the kinetic analysis ..... GONG Dehong, ZHANG Zhongxiao, ZHU Bing, QIAN Jin (40)  
Emission forms of trace elements during oxygen-enriched combustion at high pressure ..... DONG Jinglan (50)  
Numerical study on combustion characteristics of a tangentially fired pulverized-coal boiler in O<sub>2</sub>/CO<sub>2</sub> atmosphere ..... JI Haimin, XU Dangqi, LI Hongzhi, ZHAO Zhiping, XUE Ning, ZHOU Fei, NIE Jianping (54)  
Experimental study on ignition temperature of coupling system of low-concentration gas and pulverized coal ..... LIU Lili, CUI Yong'an, QIAO Xiaolei, XU Liang, FAN Baoguo, JIN Yan (60)  
Experimental investigation on pyrolysis characteristics of oil sludge in N<sub>2</sub>/CO<sub>2</sub> atmosphere ..... ZHOU Xiong, LI Wei, BAI Jisong, LIN Shunhong, WANG Chao, LÜ Quanwei (64)  
Hot state numerical simulation for a new multi-burner entrained flow coal gasifier ..... TANG Jia, WANG Qinhui, SUN Yongcai, SHI Zhenglun, WU Long, LIU Zhenbiao, ZHOU Huaizu, YANG Shouqing (70)

#### Power generation technology forum

- Dynamic soft measurement method for coal calorific value based on Calman filter ..... HAO Xiaohui, LIU Xinping, BIAN Fang, ZHANG Quan (77)  
Flow field in regulating valve of water storage tank for ultra supercritical unit boiler; characteristics and optimization ..... HE Qingzhong, LIU Jia, DONG Xuelian, GUO Bin, ZHANG Cheng, CHEN Xi, LIU Yucong, LIU Yi (82)  
Security analysis of blade-disc in governing stage under various sequence valve modes ..... CHANG Dongfeng, JIA Hongjin, JIANG Hao, GU Weiwei (89)  
Improvement on fast algorithm of steam turbine governing stage's characteristic curve ..... LI Huijun, ZHAO Xiang (94)  
Fuzzy comprehensive assessment of thermal power unit load control system based on time domain index ..... WANG Yinsong, TIAN Jingyu, LI Shizhe, SU Jie (99)  
Influence of waviness structural parameters on heat transfer and fluid flow characteristics of enamel heat storage elements ..... GAO Jianqiang, WEI Riguang, YANG Xiangzhao, ZHANG Lei, GU Xingpeng (104)  
Discussions on tube bundle arrangement factor for condensers in steam turbines ..... ZHANG Li, ZENG Shenfu, CHENG Haoran, HAN Chenglong (110)  
Research on control system of voltage stabilizer pressure and liquid level in nuclear power station ..... WU Wanqiang, WU Jie, ZENG Bifan, XU Zhibin, MA Xiaoqian (115)

#### Field experience exchange

- Fuel fast cutting plan for thermal power unit during FCB process ..... SUN Lingfang, LANG Kun, REN He (121)  
Application of combined system of low pressure economizer and air heater ..... ZHANG Huadong, ZHANG Zhixiang, JIA Zhaopeng, LIANG Shuanggui, XU Dangqi, ZHANG Guangcui, HOU Yun (127)

RELI FADIAN

# 热力发电

ISSN 1002-3364



中国标准连续出版物号: ISSN 1002-3364  
万方数据 CN 61-1111/TM

邮发代号: 国外 M3261  
国内 52-103

定价: 16.00 元/期  
192.00元/年