

目 次

· 基础研究 ·

高阶球形谐波法求解辐射传输方程:模型开发与 ANSYS-Fluent 软件实现
..... 庞佳婕,王 良,曾 琦,曹 俊,任 涛(1)

· 动力设备与系统 ·

循环流化床锅炉纯氨燃烧排放特性模拟
..... 杜炳君,蒋 苓,张 扬,张 海,吕俊复,柯希玮(10)

炉内含颗粒耗散介质中的声波衰减特性研究
..... 任国辉,姜根山,刘月超,许伟龙(19)

基于径向基函数的声速法炉内测温实验研究
..... 檀经考,李 娜,陈乐航,周屈兰(28)

吸力面合成射流对某亚音速轴流压气机转子性能的影响
..... 王 广,吴 青,廖英可,楚武利(37)

复杂载荷下核级管路支架的多力学目标优化布置
..... 孙宇翔,陈 丽,龙 波,王艳革,刘诗华,贾 坤(45)

· 新能源与储能 ·

太阳能高温腔式吸热器在典型运行工况下的传热与应力分析
..... 祝大龙,陈宇轩,张燕平(54)

基于二次分解和 BiGRU 的超短期光伏发电功率预测
..... 韩 博,李长青,刘卫亮,刘 帅,刘长良,徐家豪,王 昕(62)

分流叶片非谐对离心压气机叶轮气动噪声特性的影响研究
..... 梁春娟,唐新姿,金绍哲(70)

不同来流条件下新型变桨风力机叶片结构动力响应分析
..... 李承泽,包道日娜,石仲玉,姜翱翔,高 帆,刘磊磊,杨皓然,徐 欢(80)

计及风电场无功支撑性能的多目标优化调度策略
..... 杨 健,王 玮,周 强,付炳喆,任国瑞(87)

基于 rLADRC 的磁悬浮高速飞轮储能转子系统振动抑制
..... 吴传磊,滕 伟,宋顺一,孙铁雷,彭迪康,柳亦兵(96)

· 数字化与智能化 ·

风力机齿轮箱无监督故障诊断方法研究
..... 俎海东,焦晓峰,张万福,孙 康,李 春(106)

基于强化双树复小波包变换的风电机组偏航轴承损伤识别
..... 王晓龙,金韩微,张博文,石海超,杨秀彬,何玉灵(115)

面向多模态过程的凝汽器故障特征提取研究
..... 朱继涛,曾水平,贺宇清,郑佳佳,代雨辰,司凤琪(124)

· 绿色低碳 ·

KOH 用量对煤气化细灰衍生活性炭理化性质及超级电容器性能的影响
..... 田晓东,陈智超,侯 建(131)

· 综合能源系统 ·

基于轮胎热解、垃圾等离子气化与电解水耦合的多联产系统集成及分析
..... 周明源,陈 衡,赵焕林,潘佩媛,徐 钢,吴礼宁(141)

考虑多种负荷需求响应的综合能源系统优化运行
..... 邹 鑫,陈丹昊,邹爱孟,马天男(154)

CONTENTS

• Fundamental Research •

High-order Spherical Harmonic Methods for Solving Radiative Transfer Equations; Model Development and Implementation in ANSYS-Fluent Software PANG Jiajie, WANG Liang, ZENG Qi, CAO Jun, REN Tao(1)

• Power Equipment and System •

Simulation on Emission Characteristics of Ammonia Combustion in a Circulating Fluidized Bed Boiler DU Bingjun, JIANG Ling, ZHANG Yang, ZHANG Hai, LÜ Junfu, KE Xiwei(10)

Acoustic Wave Attenuation Characteristics of Particle-laden Dissipative Media in Furnaces REN Guohui, JIANG Genshan, LIU Yuechao, XU Weilong(19)

Experimental Research on Furnace Temperature Measurement by Radial Basis Function Based on Acoustic Pyrometry TAN Jingkai, LI Na, CHEN Lehang, ZHOU Qulan(28)

Influence of Suction Surface Synthetic Jet on Performance of a Subsonic Axial Flow Compressor Rotor WANG Guang, WU Qing, LIAO Yingke, CHU Wuli(37)

Multi Mechanical Objective Optimization Layout for Nuclear Safety-related Piping Supports Under Complex Loads SUN Yuxiang, CHEN Li, LONG Bo, WANG Yanping, LIU Shihua, JIA Kun(45)

• New Energy Resources and Energy Storage •

Heat Transfer and Stress Analysis of a Solar High Temperature Cavity Receiver Under Typical Operating Conditions ZHU Dalong, CHEN Yuxuan, ZHANG Yanping(54)

Ultra-short-term Photovoltaic Power Forecasting Based on Secondary Decomposition and BiGRU HAN Bo, LI Changqing, LIU Weiliang, LIU Shuai, LIU Changliang, XU Jiahao, WANG Xin(62)

Research on Influence of Non-harmonic Splitter Blade on Aerodynamic Noise Characteristics of Centrifugal Compressor Impeller LIANG Chunjuan, TANG Xinzi, JIN Shaozhe(70)

Dynamic Response Analysis of a New Type of Variable Pitch Wind Turbine Blade Structure Under Different Inflow Conditions LI Chengze, BAO Daorina, SHI Zhongyu, JIANG Aoxiang, GAO Fan, LIU Leilei, YANG Haoran, XU Huan(80)

Multi-objective Optimal Dispatch Strategy Considering Reactive Power Support Performance of Wind Farm YANG Jian, WANG Wei, ZHOU Qiang, FU Bingzhe, REN Guorui(87)

Vibration Suppression of Magnetic Levitation High-speed Flywheel Energy Storage Rotor System Based on rLADRC WU Chuanlei, TENG Wei, SONG Shunyi, SUN Tielei, PENG Dikang, LIU Yibing(96)

• Digitalization and Intelligentization •

Research on Unsupervised Fault Diagnosis Method for Wind Turbine Gearbox ZU Haidong, JIAO Xiaofeng, ZHANG Wanfu, SUN Kang, LI Chun(106)

Damage Identification of Wind Turbine Yaw Bearing Based on Enhanced Dual Tree Complex Wavelet Packet Transform WANG Xiaolong, JIN Hanwei, ZHANG Bowen, SHI Haichao, YANG Xiubin, HE Yuling(115)

Research on Fault Condenser Feature Extraction for Multi-modal Processes ZHU Jitao, ZENG Shuiping, HE Yuqing, ZHENG Jiajia, DAI Yuchen, SI Fengqi(124)

• Green Energy and Low-carbon Technology •

Effect of KOH Dosage on the Physicochemical Properties and Supercapacitor Performance of Coal Gasification Fine Ash Derived Active Carbon TIAN Xiaodong, CHEN Zhichao, HOU Jian(131)

• Integrated Energy System •

An Integrated Poly-generation System and Analysis Based on Coupling of Tire Pyrolysis, Waste Plasma Gasification and Water Electrolysis ZHOU Mingyuan, CHEN Heng, ZHAO Huanlin, PAN Peiyuan, XU Gang, WU Lining(141)

Optimized Operation of Integrated Energy Systems Considering Multiple Load Demand Response ZOU Xin, CHEN Danhao, ZOU Aimeng, MA Tiannan(154)