

目 次

燃烧、传热、传质

涡轮工作叶片不同区域簸箕形孔的气膜冷却特性实验

..... 陈 磊, 张灵俊, 王文璇, 曹飞飞, 刘存良 (20220368)

大型结冰风洞热气供气防除冰试验技术

..... 赵 照, 熊建军, 冉 林, 易 贤 (20210582)

冰雹连续抛射的气固耦合输运计算与试验验证

..... 孙 科, 宋江涛, 任博扬, 王 欢 (20220063)

喷注位置对多组分燃料超燃冲压发动机燃烧的影响

..... 滑远帆, 李世鹏, 王宁飞, 于文浩, 马源辰 (20210569)

外激励作用下分层旋流火焰流场结构与火焰响应特性

..... 宋雷洋, 姚 倩, 黄晓锋, 袁 丽, 李建中, 邓远灏, 田世泽 (20220362)

圆台凹凸结构通道的流动传热性能和熵产研究

..... 赵 振, 徐 亮, 高建民, 席 雷, 李云龙 (20210585)

涡轮动叶背侧不同叶高处异型孔气膜对比

..... 王 磊, 李海旺, 谢 刚, 周志宇 (20220350)

基于双层壁冷却结构的综合冷效数值解耦研究

..... 刘润洲, 李海旺, 由儒全, 黄 毅, 陶 智 (20220372)

当量比对铝粉/空气旋转爆轰发动机流场影响的数值模拟

..... 李世全, 杨 帆, 王宇辉, 王健平, 张国庆 (20210560)

双层混合管排气出口导流遮挡的冷却与红外辐射特性

..... 宋 健, 张靖周, 单 勇 (20220374)

颗粒物沉积与平板气膜冷却耦合效应的数值研究

..... 伍 赫, 郝子晗, 杨 星, 丰镇平 (20220462)

喷嘴结构和射流参数对射流预冷温度特性的影响

..... 冯 爽, 李宝宽, 杨晓晰, 崔鹏飞 (20210566)

RP-3 航空煤油/O₂ 的氧化与着火特性试验

..... 张鑫炜, 曾 文, 胡 斌, 殷阁媛, 张英佳, 马宏宇 (20220381)

结构、强度、振动

复合材料涡轮轴结构损伤演化及失效机理

..... 沙云东, 黄清轩, 骆 丽, 白 旭 (20210572)

基于小波包变换与 CEEMDAN 的滚动轴承故障诊断方法

..... 栾孝驰, 李彦微, 徐 石, 沙云东 (20220473)

CCF300/QY9511 层合板高速砂粒连续冲蚀特性试验

..... 刘璐璐, 于 飞, 赵振华, 罗 刚, 陈 伟 (20220375)

热力耦合情况下的导弹导引头多尺度并行拓扑优化设计方法

..... 郭伟超, 李 辉, 李丙震, 孔令飞, 刘 永, 苏力争 (20220359)

叶片丢失后停车过程转子瞬态动力响应分析 刘 畅, 徐自力, 霍施宇, 慕琴琴, 徐 健 (20210571)

气动热力学与总体设计

对转螺旋桨气动力和气动噪声风洞试验技术 陈正武, 姜裕标, 赵 昱, 卢翔宇, 全 帆 (20220476)

超声速飞行器减阻杆/盘与双喷流组合构型减阻和防热性能 许 阳, 陈宣亮 (20220351)

基于遗传算法的横向减阻沟槽优化及机理 宋居正, 李耕耘 (20220387)

动力传输

受载齿轮副啮入冲击激励计算方法 王承登, 何泽银, 杨 震, 伍宏建, 刘 威 (20220383)

高速圆柱滚子轴承环下润滑热场特性 王轶泽, 刘红彬, 孟永钢 (20210583)

圆弧端齿齿面加工偏差对配合状态的影响 孙 帅, 孙惠斌, 付 玄, 童 浩, 颜 诚 (20220365)

叶轮机械

基于吸力面叠加厚度的超跨声叶型优化设计 刘帅鹏, 耿少娟, 金 芸, 李鑫龙, 张宏武 (20210577)

进气支板周向位置对动叶激励和振动的影响 彭 威, 任晓栋, 李雪松, 顾春伟, 吴 宏 (20220371)

火箭发动机

内壁结构对气体中心式同轴离心喷嘴喷雾特性影响

..... 高玉超, 楚 威, 苏凌宇, 姜传金, 谢 远, 全毅恒 (20220360)

Contents**Combustion, Heat and Mass Transfer**

- Experiment on film cooling characteristics of dustpan shaped holes at different positions of turbine blade CHEN Lei, ZHANG Lingjun, WANG Wenxuan, CAO Feifei, LIU Cunliang (20220368)
Hot air supply anti/de-icing test technology in large-scale icing wind tunnel ZHAO Zhao, XIONG Jianjun, RAN Lin, YI Xian (20210582)
Calculation and test verification of gas-solid coupling pneumatic transport of hail continuous ejection SUN Ke, SONG Jiangtao, REN Boyang, WANG Huan (20220063)
Influence of injection position on combustion of multi-component fuel scramjet HUA Yuanfan, LI Shipeng, WANG Ningfei, YU Wenhao, MA Yuanchen (20210569)
Flow field and flame response characteristics of stratified swirl flame with external excitation SONG Leiyang, YAO Qian,
HUANG Xiaofeng, YUAN Li, LI Jianzhong, DENG Yuanhao, TIAN Shize (20220362)
Study on flow and heat transfer performance and entropy generation in concave-convex channel with frustum of a cone ZHAO Zhen, XU Liang, GAO Jianmin, XI Lei, LI Yunlong (20210585)
Comparison on film cooling of different hole shapes at different blade heights on the suction surface of rotor blade WANG Lei, LI Haiwang, XIE Gang, ZHOU Zhiyu (20220350)
Numerical decoupling of overall cooling effectiveness based on double-wall cooling structure LIU Runzhou, LI Haiwang, YOU Ruquan, HUANG Yi, TAO Zhi (20220372)
Numerical simulations on effect of equivalence ratio on flow field in aluminum power/air rotating detonation engines LI Shiquan, YANG Fan, WANG Yuhui, WANG Jianping, ZHANG Guoqing (20210560)
Cooling and infrared radiation characteristics of diversion shielding at exhaust outlet of double-layer mixing duct SONG Jian, ZHANG Jingzhou, SHAN Yong (20220374)
Numerical study on coupling effects of particle deposition and film cooling over flat plate surfaces WU He, HAO Zihan, YANG Xing, FENG Zhenping (20220462)
Effect of nozzle structure and jet parameters on the temperature characteristics of mass injection and pre-compressor cooling FENG Shuang, LI Baokuan, YANG Xiaoxi, HU Pengfei (20210566)
Experiment on the oxidation and ignition delay characteristics of RP-3 kerosene/oxygen ZHANG Xinwei, ZENG Wen, HU Bin, YIN Geyuan, ZHANG Yingjia, MA Hongyu (20220381)

Structure, Strength and Vibration

- Damage evolution and failure mechanism of composite turbine shaft structure SHA Yundong, HUANG Jingxuan, LUO Li, BAI Xu (20210572)
Rolling bearing fault diagnosis method based on wavelet packet transform and CEEMDAN LUAN Xiaochi, LI Yanzheng, XU Shi, SHA Yundong (20220473)

- Experiment on high-speed sand continuous erosion characteristics of CCF300/QY9511 composite laminates LIU Lulu, YU Fei, ZHAO Zhenhua, LUO Gang, CHEN Wei (20220375)
- Multi-scale parallel topology optimization design method for missile seeker with thermo-dynamic coupling loads GUO Weichao, LI Hui, LI Bingzhen, KONG Lingfei, LIU Yong, SU Lizheng (20220359)
- Transient dynamic response analysis of rotor during shutdown after blade loss LIU Chang, XU Zili, HUO Shiyu, MU Qinjin, XU Jian (20210571)

Aerothermodynamics and Aeroengine Design

- Counter-rotating propellers aerodynamic and aerodynamic noise test technology in wind tunnel CHEN Zhengwu, JIANG Yubiao, ZHAO Yu, LU Xiangyu, TONG Fan (20220476)
- Drag and heat flux reduction performance of supersonic vehicle with combination model of aerospike/aerodisk and double jet XU Yang, CHEN Xuanliang (20220351)
- Shape optimization and mechanism of transverse groove for drag reduction based on genetic algorithm SONG Juzheng, LI Gengyun (20220387)

Power Transimission

- Calculation method of meshing impact excitation of loaded gear pair WANG Chengdeng, HE Zeyin, YANG Zhen, WU Hongjian, LIU Wei (20220383)
- Study on thermal field characteristics of high speed cylindrical roller bearing under ring lubrication WANG Yize, LIU Hongbin, MENG Yonggang (20210583)
- Influence of machining deviation of curvic couplings tooth surface on fitting state SUN Shuai, SUN Huibin, FU Xuan, TONG Hao, YAN Cheng (20220365)

Turbomachinery

- Supersonic and transonic airfoil optimization design based on superimposing thickness on suction surface LIU Shuaipeng, GENG Shaojuan, JIN Yun, LI Xinlong, ZHANG Hongwu (20210577)
- Influence of circumferential position of intake struts on rotor blade excitation and vibration PENG Wei, REN Xiaodong, LI Xuesong, GU Chunwei, WU Hong (20220371)

Rocket Engine

- Gas-centered swirl coaxial injectors spray with variable inner wall structures GAO Yuchao, CHU Wei, SU Lingyu, JIANG Chuanjin, XIE Yuan, TONG Yiheng (20220360)