

目次

气动热力学与总体设计

对数螺旋线翼型的静动态气动特性分析 杨建, 付丽华, 刘霄龙, 关士学, 汪洋, 宋华 (20240660)

可变弯度叶片式旋流畸变发生器仿真和试验研究 屠宝锋, 田文涛, 叶巍, 夏爱国, 脱伟, 吕永召 (20240653)

与发动机匹配的旁路式双喉道气动矢量喷管数值模拟研究 李亦, 徐惊雷, 潘睿丰, 张玉琪, 黄帅 (20240649)

0°壁面角度约束下超声速射流偏转控制研究 周宇航, 顾蕴松, 李琳恺 (20240659)

尾部推进无人机进气道与螺旋桨耦合流动特性 任家昊, 吴祯龙, 谭慧俊, 王子运, 李东坡 (20250205)

压力波周向传播对风扇转子气动弹性稳定性的影响 余永博, 王延荣, 韩乐 (20240762)

基于 TBOS 的超声速喷流模态诊断与非线性交互机制 汪丽媛, 徐希海, 杨沙伟, 高军辉 (20250235)

结构、强度、振动

基于自适应 MOMEDA 滚动轴承故障特征提取方法 吕中亮, 李玲凤, 贾翔宇, 徐友苇, 安智伟, 彭麟昊 (20240646)

基于三维接触摩擦单元的套齿连接解析建模研究 于平超, 蒋科, 陶玄君, 李爽, 向振洋 (20240764)

考虑多源不确定性的复合材料风扇叶片高周疲劳失效概率评估 唐旭, 陈勇, 欧阳华, 田杰 (20240654)

多误差作用下花键载荷分配和可靠性分析 赵庆岩, 赵志豪, 鲁婷婷, 庄新臣, 喻天翔 (20240771)

组合式弹性金属密封泄漏特性实验研究与结构优化 温帅方, 黄婵媛, 赖道贵, 孙丹, 杨泽敏, 李玉, 任国哲 (20240443)

基于 HO-LSSVM 的混合陶瓷轴承全寿命周期故障诊断 温金鹏, 李军宁, 罗文广, 白梦莎, 张放 (20240545)

特殊工况下考虑突发失效混合分布的航空发动机维护策略研究 管泽菲, 刘勤明, 叶春明, 汪宇杰 (20250290)

两种阴接头型梁式管路连接结构优化设计与密封性能对比 许玉涵, 崔颖, 冯文轩, 武浩杰, 孙涵 (20250202)

燃烧、传热、传质

多工作模态下凹腔驻涡超级燃烧室点火特性研究 钟世林, 彭维康, 康玉东, 邓远灏, 张飞, 曾嵘, 侯凌云 (20250603)

旋转液膜在旋转气流剪切下的三维扰动线性稳定性分析 孙晓强, 严 红, 陈福振 (20240562)

基于 PIV/PLIF 同步测试技术的燃烧室头部间相互作用研究
..... 魏 为, 惠 鑫, 安 强, 薛 鑫, 余诗扬 (20250160)

芳香烃含量对涡轴发动机排气污染影响的试验研究
..... 资海林, 赵 腾, 黄开明, 张 阳, 马 瑛, 李 维, 吕诗宇 (20250230)

涂层厚度对温度敏感涂料特性的影响实验研究 欧阳波, 高丽敏, 张 峻, 王 磊, 刘 波 (20240629)

替代燃料对 RP-3 航空煤油和其混合燃料的主要燃烧性能影响
..... 刘文杰, 陈春香, 卢 苇, 余彬宾, 梁斌兰 (20250320)

非均匀强余旋进气下一体化加力燃烧室支板整流特性研究
..... 席玉茹, 王成洪, 田泽民, 李井华, 颜应文 (20240758)

叶轮机械

扩压器对高负荷轴流压气机气动性能的影响及机理研究
..... 李立涛, 李紫良, 常雅欣, 黄金河, 曲宗磊, 吴艳辉 (20250081)

可压缩修正的 $\gamma-Re_{\theta t}$ 转捩模型在叶轮机械中的应用
..... 孙叔贤, 王 亮, 卫 刚, 田晓沛, 朱慧玲, 周 玲, 季路成 (20240657)

火箭发动机

基于耦合传热的固体发动机喷管壁面能量交换预示模型
..... 杨 博, 昌 飞, 李映坤, 何振川, 陈 雄 (20250506)

液氧煤油补燃发动机深度节流工况低频振荡特性 廖胤权, 王春民, 张晓光 (20240650)

自动控制

氢燃料电池无人机实时分层能量管理系统研究
..... 吴 宇, 李瑞珍, 贾璧聪, 江 雪, 闫 浩, 李伟林 (20240558)

安全性、适航

基于 Caps-BiGRU-Attention 的直升机涡轮发动机健康管理方法
..... 张振良, 毕俊喜, 何荣荣, 崔 哲, 周相志 (20240775)

Contents

Aerothermodynamics and Aeroengine Design

- Analysis on the static and dynamic aerodynamic characteristics of the logarithmic spiral airfoil
..... YANG Jian, FU Lihua, LIU Xiaolong, GUAN Shixue, WANG Yang, SONG Hua (20240660)
- Numerical simulation and experimental investigation on swirl distortion generator with variable
curvature blade TU Baofeng, TIAN Wentao, YE Wei,
XIA Aiguo, TUO Wei, LYU Yongzhao (20240653)
- Numerical simulation study of a bypass dual throat thrust vectoring nozzle for micro turbojet engines
..... LI Yi, XU Jinglei, PAN Ruifeng, ZHANG Yuqi, HUANG Shuai (20240649)
- Research on the deflection control of supersonic jet under the constraint of 0° wall angle
..... ZHOU Yuhang, GU Yunsong, LI Linkai (20240659)
- Coupled flow characteristic of inlet and tail-mounted propeller in tail-propelled unmanned aerial
..... REN Jiahao, WU Zhenlong, TAN Huijun, WANG Ziyun, LI Dongpo (20250205)
- Influence of circumferential propagation of pressure waves on aeroelastic stability of fan rotors
..... YU Yongbo, WANG Yanrong, HAN Le (20240762)
- Modal diagnostics and nonlinear interaction mechanisms of supersonic jets based on TBOS
..... WANG Liyuan, XU Xihai, YANG Shawei, GAO Junhui (20250235)

Structure, Strength and Vibration

- Fault feature extraction method of rolling bearing based on adaptive MOMEDA
..... LYU Zhongliang, LI Lingfeng, JIA Xiangyu,
XU Youwei, AN Zhiwei, PENG Linhao (20240646)
- Research on analytical modeling of spline coupling based on three-dimensional contact friction unit
..... YU Pingchao, JIANG Ke, TAO Xuanjun, LI Shuang, XIANG Zhenyang (20240764)
- High cycle fatigue failure probability assessment including multi source uncertainties with application to
composite fan blades TANG Xu, CHEN Yong, OUYANG Hua, TIAN Jie (20240654)
- Load distribution and reliability analysis of splines under multiple errors
..... ZHAO Qingyan, ZHAO Zhihao, LU Tingting, ZHUANG Xinchun, YU Tianxiang (20240771)
- Experimental study on leakage characteristics and structural optimization of combined elastic metal seal
..... WEN Shuaifang, HUANG Chanyuan, LAI Daogui,
SUN Dan, YANG Zemin, LI Yu, REN Guozhe (20240443)
- Fault diagnosis of the Hybrid ceramic bearing in whole life cycle based on HO-LSSVM
..... WEN Jinpeng, LI Junning, LUO Wenguang, BAI Mengsha, ZHANG Fang (20240545)
- Research on aircraft engine maintenance strategy considering mixture distribution of random failures under
special operating conditions GUAN Zefei, LIU Qinming, YE Chunming, WANG Yujie (20250290)

Comparison of optimized design and sealing performance of beam seal structure with two types of female connectors XU Yuhan, CUI Ying, FENG Wenxuan, WU Haojie, SUN Han (20250202)

Combustion, Heat and Mass Transfer

Investigation on the ignition characteristics of trapped vortex cavity hyper-burner under multi-modes ZHONG Shilin, PENG Weikang, KANG Yudong, DENG Yuanhao, ZHANG Fei, ZENG Rong, HOU Lingyun (20250603)

Linear stability analysis of three dimensional perturbations on a swirling liquid sheet subjected to swirling gas flows SUN Xiaoqiang, YAN Hong, CHEN Fuzhen (20240562)

Study on flame-flame interaction based on simultaneous PIV/PLIF test WEI Wei, HUI Xin, AN Qiang, XUE Xin, YU Shiyang (20250160)

Experimental testing on influence of aromatic hydrocarbon content on exhaust emission of turboshaft engine ZI Hailin, ZHAO Teng, HUANG Kaiming, ZHANG Yang, MA Ying, LI Wei, LYU Shiyu (20250230)

Experimental study on influence of coating thickness on characteristics of temperature sensitive paint OUYANG Bo, GAO Limin, ZHANG Jun, WANG Lei, LIU Bo (20240629)

Influence of alternative fuels on the main combustion performance of RP-3 aviation kerosene and its blended fuels LIU Wenjie, CHEN Chunxiang, LU Wei, YU Binbin, LIANG Binlan (20250320)

Research on rectification strut characteristics of an integrated afterburner with strong cosine non-uniform inflow XI Yuru, WANG Chengqi, TIAN Zemin, LI Jinghua, YAN Yingwen (20240758)

Turbomachinery

Research on the influence and mechanism of diffusers on the aerodynamic performance of high-load axial compressors LI Litao, LI Ziliang, CHANG Yaxin, HUANG Jinhe, QU Zonglei, WU Yanhui (20250081)

Application of compressibility corrected $\gamma-Re_{\theta t}$ transition model in turbomachinery SUN Shuxian, WANG Liang, WEI Gang, TIAN Xiaopei, ZHU Huiling, ZHOU Ling, JI Lucheng (20240657)

Rocket Engine

Prediction model for wall energy exchange in solid rocket motor nozzles based on coupled heat transfer YANG Bo, CHANG Fei, LI Yingkun, HE Zhenchuan, CHEN Xiong (20250506)

Low frequency oscillation characteristics of deep throttled staged combustion LOX/kerosene engine LIAO Yinquan, WANG Chunmin, ZHANG Xiaoguang (20240650)

Autocontrol

Research on real-time hierarchical energy management systems for hydrogen fuel cell drones WU Yu, LI Ruizhen, JIA Bicong, JIANG Xue, YAN Hao, LI Weilin (20240558)

Safety, Airworthiness

Health management method of helicopter turbine engine based on Caps-BiGRU-Attention ZHANG Zhenliang, BI Junxi, HE Rongrong, CUI Zhe, ZHOU Xiangzhi (20240775)