

## 目次

### 结构、强度、振动

- 形状记忆合金梁式管接头密封性能数值研究 ..... 崔颖, 王大玮, 于颖嘉, 张宏翔, 刘志远 (513)
- 航空发动机高压转子模拟平衡工艺分析与控制 ..... 汪俊熙, 任家海, 汤福龙 (522)
- 基于气液加载方式的机匣热内压试验方法  
..... 杨峰, 王新, 刘德军, 王晓森, 雷霆, 周天朋 (535)
- 带有挤压油膜阻尼器的转子系统动力学相似设计 ..... 刘准, 廖明夫, 邓旺群, 杨海 (546)
- 基于 Elman 的荧光油膜厚度近效测量 ..... 钱泓江, 董秀成, 张征宇, 徐椰烃, 王超 (558)
- 胶接修复工艺的复合材料外涵机匣强度分析  
..... 吴涵林, 杨际申, 姚改成, 苗国磊, 谭畅, 石多奇, 齐红宇 (569)

### 燃烧、传热、传质

- 过渡型凹腔超声速燃烧流动振荡抑制方法 ..... 蔡建华, 田野, 肖保国, 邢建文 (578)
- 喷嘴防积碳结构对燃油分布的影响 ..... 张荣幸, 杨大伟, 马柱, 张书豪, 戴金鑫, 王良 (588)
- 无水甲醇质量比对紧凑型预冷器的结霜和抑霜性能的影响  
..... 韦宏, 杨学森, 李治达, 郭晓峰, 唐中富, 付超, 董威 (596)
- 侧喷式一体化支板火焰稳定器液雾分布试验 ..... 张权, 刘玉英, 谢奕, 高昭, 刘广海 (607)
- 气液针栓式喷注器液膜破碎过程和结构的数值研究  
..... 林伟, 郑水华, 柴敏, 孙泽楠, 金台 (618)
- 丙烷/空气稀薄预混合气流动下的激光点火特性  
..... 张俊杰, 郭晓阳, 王朝君, 胡二江, 黄佐华 (630)

## 叶轮机械

- 缝式机匣处理对对转压气机的扩稳机理 ..... 高丽敏, 王 磊, 茅晓晨, 郭彦超 (640)
- 基于 EWT 的离心压气机出口动态压力样本熵分析 ..... 刘 雁, 李宇宸, 张 赫, 肖 军 (655)
- 叶顶间隙和减振阻尼台对多级轴流压气机性能影响的数值模拟 ..... 陈 燕, 滕 鑫, 楚武利 (665)
- 压气机叶顶流动不稳定性试验和数值研究 ..... 王 昊, 王 牌, 向宏辉, 张建武, 王掩刚 (674)
- 对转压气机中机匣处理的非定常影响 ..... 郭彦超, 高丽敏, 茅晓晨, 王 磊 (685)

## 气动热力学与总体设计

- 附面层吸入式进气道内流动损失特性 ..... 邓文剑, 王占学, 周 莉, 赵海宇 (698)
- 桨间距对某型共轴对转螺旋桨气动性能的影响 ..... 汤斯佳, 曹德松, 闫文辉, 王雪晨, 邓佳子 (709)
- 自动变桨距螺旋桨电推进系统能效优化方法 ..... 魏宝泽, 杨 勇, 张新蕾, 张 驰 (717)
- 反推力装置对民航飞机减速性能影响 ..... 黄敬杰, 张 鑫, 孟 超, 田琦楠, 徐 丹 (728)
- Ma10 条件超燃冲压发动机自由射流试验过程 ..... 张冬青, 邓维鑫, 邢建文, 何 燊 (735)

## 安全性、适航

- 适航指令案例安全风险灰色评估与预测模型 ..... 曹惠玲, 胡彦杰, 赵 洁 (743)

## 动力传输

- 控制力矩陀螺轴承组件摩擦力矩异常波动机理 ..... 邓凯文, 谢鹏飞, 廖 辉, 周 刚, 邓四二 (752)

**Contents**

**Structure, Strength and Vibration**

- Numerical study on the sealing performance of shape memory alloy beam seal  
..... CUI Ying, WANG Dawei, YU Yingjia, ZHANG Hongxiang, LIU Zhiyuan ( 513 )
- Analysis and control of dummy balance process of aero-engine high pressure rotor  
..... WANG Junxi, REN Jiahai, TANG Fulong ( 522 )
- Thermal internal pressure test method of casing based on gas-liquid loading  
..... YANG Feng, WANG Xin, LIU Dejun, WANG Xiaosen, LEI Ting, ZHOU Tianpeng ( 535 )
- Dynamic similarity design of rotor system with squeeze film damper  
..... LIU Zhun, LIAO Mingfu, DENG Wangqun, YANG Hai ( 546 )
- Fluorescent oil film thickness approximate efficiency measurement based on Elman  
..... QIAN Hongjiang, DONG Xiucheng, ZHANG Zhengyu, XU Yeting, WANG Chao ( 558 )
- Strength analysis of composite bypass casing of aero-engine in adhesive bonded repair  
..... WU Hanlin, YANG Jishen, YAO Gaicheng,  
MIAO Guolei, TAN Chang, SHI Duoqi, QI Hongyu ( 569 )

**Combustion, Heat and Mass Transfer**

- Suppressing oscillation method of supersonic combustion and flow in transitional cavity  
..... CAI Jianhua, TIAN Ye, XIAO Baoguo, XING Jianwen ( 578 )
- Effect of anti-carbon deposition structure on fuel distribution of nozzle ..... ZHANG Rongxing,  
YANG Dawei, MA Zhu, ZHANG Shuhao, DAI Jinxin, WANG Liang ( 588 )
- Effects of mass ratio of anhydrous methanol on frosting and defrosting performance of compact precooler  
..... WEI Hong, YANG Xuesen, LI Zhida,  
GUO Xiaofeng, TANG Zhongfu, FU Chao, DONG Wei ( 596 )
- Experiment on spray distribution of an integrated strut flameholder with cross injection  
..... ZHANG Quan, LIU Yuying, XIE Yi, GAO Zhao, LIU Guanghai ( 607 )
- Numerical simulation of liquid sheet breakup process and structures in gas-liquid pintle injector  
..... LIN Wei, ZHENG Shuihua, CHAI Min, SUN Zenan, JIN Tai ( 618 )
- Laser ignition characteristics in propane/air lean premixed gas flow  
..... ZHANG Junjie, GUO Xiaoyang, WANG Chaojun, HU Erjiang, HUANG Zuohua ( 630 )

**Turbomachinery**

- Mechanism of stability improvement with slot casing treatment in counter-rotating compressor  
..... GAO Limin, WANG Lei, MAO Xiaochen, GUO Yanchao ( 640 )

Sample entropy characteristics of dynamic pressure at outlet of centrifugal compressor based on EWT  
 ..... LIU Yan, LI Yuchen, ZHANG He, XIAO Jun ( 655 )

Numerical simulation of effect of tip clearance and vibration damper on performance of multi-stage axial  
 flow compressor ..... CHEN Yan, TENG Xin, CHU Wuli ( 665 )

Experiment and numerical investigation on tip flow instabilities of compressors  
 ..... WANG Hao, WANG Pai, XIANG Honghui, ZHANG Jianwu, WANG Yangang ( 674 )

Unsteady effect on casing treatment in counter-rotating axial flow compressor  
 ..... GUO Yanchao, GAO Limin, MAO Xiaochen, WANG Lei ( 685 )

**Aerothermodynamics and Aeroengine Design**

Flow losses characteristics of BLI inlet  
 ..... DENG Wenjian, WANG Zhanxue, ZHOU Li, ZHAO Haiyu ( 698 )

Stage spacing on aerodynamic performance of a certain type of coaxial contra rotating propeller  
 ..... TANG Sijia, CAO Desong, YAN Wenhui, WANG Xuechen, DENG Jiazi ( 709 )

Energy efficiency optimization method of automatic variable pitch propeller electric propulsion system  
 ..... WEI Baoze, YANG Yong, ZHANG Xintan, ZHANG Chi ( 717 )

Effect of thrust reverser on the deceleration performance of civil aircraft  
 ..... HUANG Jingjie, ZHANG Xin, MENG Chao, TIAN Qinan, XU Dan ( 728 )

Scramjet free-jet test process at *Ma*10 conditions  
 ..... ZHANG Dongqing, DENG Weixin, XING Jianwen, HE Can ( 735 )

**Safety, Airworthiness**

Grey evaluation and prediction model of safety risk in airworthiness directive cases  
 ..... CAO Huiling, HU Yanjie, ZHAO Jie ( 743 )

**Power Transimission**

Mechanism of abnormal fluctuation of friction torque of control moment gyro bearing assembly  
 ..... DENG Kaiwen, XIE Pengfei, LIAO Hui, ZHOU Gang, DENG Sier ( 752 )