

中国科技论文统计源期刊
中国中文核心期刊
中国科学引文数据库来源期刊
中国学术期刊综合评价数据库来源期刊
入网《万方数据-数字化期刊群》

ISSN 1006-1355
CN 31-1346/TB

噪声与振动控制

ZAOSHENG YU ZHENDONG KONGZHI

1

2022年 2月

*NOISE AND VIBRATION
CONTROL*

ISSN 1006-1355



9 771006 135225

中国声学学会主办
第 42 卷 第 1 期
Vol.42 No.1

目次

振动理论与数值解法

- 1 板结构中声学黑洞参数优化及其阵列的能量汇集效应分析梁浩鸣, 高康, 刘献栋, 等
8 基于 ANSYS 二次开发的轮轨耦合模型及应用研究孟宪金, 刘林芽, 秦佳良, 等
14 含间隙多约束碰撞振动系统稳定性分析王超, 丁旺才, 李得洋, 等
20 基于弹性圆柱壳的柔性齿轮副建模及动力学分析张洋, 关先磊, 王青山, 等
28 热环境对功能梯度薄壁圆柱壳模态频率的影响吕志鹏, 刘文光, 刘超, 等
34 数控机床电机-斜齿轮齿条耦合进给系统动态特性分析王昊, 龙新华, 杜家楠, 等
41 基于 JS-BP 模型和 JS 散度的随机有限元模型修正盛腾威, 殷红, 彭珍瑞, 等
48 局域共振型平板结构的低频振动与声辐射特性分析郭彭, 周奇郑, 朱拥勇, 等
56 滚振试验台液压管道系统的振动特性分析周新建, 吕康, 周生通, 等
61 全封闭设备舱对隧道内 160 km/h 地铁气动声源影响杨志刚, 高建勇, 谭晓明, 等
67 法向振动对 Burridge-Knopoff 模型 Stick-Slip 运动影响数值研究姜磊
71 基于参数激励的两自由度耦合 MEMS 谐振式陀螺吕路婧, 李崇, 慕声波

信号处理与故障诊断

- 79 基于残差神经网络的风机叶片结冰故障诊断沈学利, 杨莹, 秦鑫宇, 等
88 多故障源混合信息的特征分离与精确辨识张建宇, 王国峰, 杨洋, 等
95 基于 LI 最小范数法的波束形成方法参数研究毛锦, 孙健, 刘凯, 等
100 基于奇异谱分解和两层支持向量机轴承故障诊断方法汤天宝, 周志健, 张涛, 等
106 基于 PARAFAC 分析和 SVM 离心泵故障诊断方法柯耀, 王琪, 苗育苗, 等
112 基于 SSA 和随机共振的旋转机械微弱信号提取高康平, 徐信忠, 师宁, 等
119 基于变分模态分解的静电监测信号去噪方法研究刘舒沁, 刘若晨, 王益民, 等
125 基于改进 MPE 与 KELM 的滚动轴承故障诊断赵云, 宿磊, 李可, 等
132 基于 SED-EMD 的大圆机轻微齿轮偏心故障诊断和丹, 张丽洁, 肖渊, 等
138 磁浮车辆辅助变流器的风机轴承振动失效分析丁杰, 尹亮, 杨小高, 等
144 基于 WELCH 算法集成学习模型的滚动轴承故障诊断张龙, 周俊, 等
150 低温多效海水淡化蒸发器换热管振动监测与分析侯峰, 张爽, 刘瑞, 等
156 基于改进叠加自动编码器轴承智能故障诊断方法陈国成, 张健, 菅雷

运载工具振动与噪声

- 162 裙板结构对市域列车车外噪声的影响分析顾汉星, 张捷, 张开林, 等
168 不同轨道结构地铁噪声辐射测试及分析张啟乐, 刘林芽, 陈高峰, 等
173 基于小波时频偏相干分析的车内异响声源识别及改善李皓, 陈长征, 王洁, 等
178 MT 车型换挡杆振动试验研究与仿真分析黄超华, 陈志远, 田子龙, 等

环境振动与环境声学

- 182 小半径曲线地段钢轨波磨对于地面振动影响的测试分析杨哲, 雷晓燕, 刘庆杰, 等
187 空场及有车状态下隧道混响特性预测分析刘卓昊, 肖新标, 刘谋凯, 等
193 基于 1/3 倍频程与传递函数方法的地铁轨道振动规律实验对比研究尹华拓, 袁宇, 曾志平, 等
200 火电厂自然通风冷却塔噪声治理研究马琪顺, 鄢晓忠, 林日成, 等

建筑振动与建筑声学

- 206 车桥耦合振动下中承式拱桥吊杆汽车冲击效应贺焯博, 郭增伟, 徐华, 等
214 基于 CFD 和风洞试验的钢桁梁悬索桥颤振稳定性分析蓝先林, 周礼平, 廖斌, 等

减振降噪设备与器材

- 220 带陀螺型声子晶体的高速列车型材结构低频隔声性能探究张茜, 刘卓昊, 李承诚, 等
227 穿孔膜与扬声器组合结构吸声性能研究张鹏, 李贤徽, 盖晓玲, 等
232 胶辊式碧谷冲击振动隔离器力学特性研究杨亚军, 廖敏, 张强, 等

振动噪声测试技术

- 238 半空间近场声全息技术的等效源配置研究景文倩
244 基于自适应组合形态滤波的柴油机气缸冲击信号检测王珉, 秦国军, 廖一凡, 等
250 风力发电机塔筒晃动位移监测新方法王华, 孟欢, 李萍, 等

工程实践

- 255 工程中三维有限长声屏障的优化设计及应用阮学云, 邵良友, 章林柯, 等
260 家用中央空调室外机结构噪声分析与控制夏凯, 刘煜, 门群英, 等
265 某 SUV 盘式制动器低频颤鸣测试分析与工程实践张军, 吴良桢, 许华政, 等

广告:

封二:上海睿深电子科技有限公司
插一:七〇四研究所减振降噪抗冲工程中心
插二:上海君协光电科技发展有限公司

插三:北京东方振动和噪声技术研究所
插四:江苏泰斯特电子设备制造有限公司
封底:上海君协光电科技发展有限公司

CONTENTS

Parameter Optimization of ABH and Energy Focalization Analysis of ABH Array of Plate Embedded StructuresLIANG Haoming, GAO Kang, LIU Xiandong, et al (001)

Research on Wheel-rail Coupling Model and Its Application Based on Secondary Development of ANSYSMENG Xianjin, LIU Linya, QIN Jialiang, et al (008)

Stability Analysis of Impact Vibration Systems with Multiple Constraints and ClearancesWANG Chao, DING Wangcai, LI Deyang, et al (014)

Modelling and Dynamic Analysis of Flexible Gear Pairs Based on Elastic Cylindrical Shell TheoryZHANG Yang, GUAN Xianlei, WANG Qingshan (020)

Effects of Thermal Environments on Modal Frequencies of a Functionally Graded Thin-walled Cylindrical ShellLYU Zhipeng, LIU Wenguang, LIU Chao, et al (028)

Dynamic Characteristic Analysis of Motor-helical Rack and Pinion Coupled Feed System of CNC MachinesWANG Hao, LONG Xinhua, DU Jianan (034)

Stochastic Finite Element Model Updating Based on JS-BP Model and Jensen-Shannon DivergenceSHENG Tengwei, YIN Hong, PENG Zhenrui, et al (041)

Analysis of Low Frequency Vibration and Acoustic Radiation Characteristics of Locally Resonant Plate StructuresGUO Peng, ZHOU Qizheng, ZHU Yongyong, et al (048)

Analysis of Vibration Characteristics of Hydraulic Pipeline Systems of Rolling Vibration Test BenchesZHOU Xinjian, LYU Kang, ZHOU Shengtong, et al (056)

Influence of Fully Enclosed Equipment Cabin on Aeroacoustic Source of a 160 km/h Metro in TunnelYANG Zhigang, GAO Jianyong, TAN Xiaoming, et al (061)

Numerical Study on Stick-Slip Vibration of Burrige-Knopoff Model Considering Vertical VibrationJIANG Lei (067)

A 2-DOF Coupled MEMS Resonant Gyroscope Driven by Parametric ExcitationLYU Lujing, LI Chong, QI Shengbo (071)

Icing Fault Diagnosis of Wind Turbine Blades Based on Residual Neural NetworkSHEN Xueli, YANG Ying, QIN Xinyu, et al (079)

Feature Separation and Precise Identification of Multiple Fault Source Mixed SignalsZHANG Jianyu, WANG Guofeng, YANG Yang (088)

Research on Constraint Parameters of Beamforming Method Based on L1 Minimum NormMAO Jin, SUN Jian, LIU Kai, et al (095)

Bearing Fault Diagnosis Method Based on Singular Spectrum Decomposition and Double-layer Support Vector MachineTANG Tianbao, ZHOU Zhijian, ZHANG Tao, et al (100)

Fault Diagnosis Method for Centrifugal Pumps Based on PARAFAC Analysis and SVMKE Yao, WANG Qi, MIAO Yuzhuo, et al (106)

Research on Weak Signal Extraction of Rotating Machinery Based on SSA and Stochastic ResonanceGAO Kangping, XU Xinxin, SHI Ning, et al (112)

Research on Denoising Method of Electrostatic Monitoring Signals Based on Variational Mode DecompositionLIU Shuqin, LIU Ruo chen, WANG Yimin, et al (119)

Fault Diagnosis of Rolling Bearings Based on Improved MPE and KELMZHAO Yun, SU Lei, LI Ke, et al (125)

Eccentricity Fault Diagnosis for the Gear of a Circular Machine Based on SED and EMDHE Dan, ZHANG Lijie, XIAO Yuan, et al (132)

Vibration Failure Analysis of Fan Bearings for Auxiliary Converters of Maglev VehiclesDING Jie, YIN Liang, YANG Xiaogao (138)

Rolling Bearing Fault Diagnosis Based on Ensemble Learning Model with WELCH AlgorithmZHANG Long, ZHOU Jun (144)

Vibration Monitoring and Analysis of Heat Exchange Tube of Low Temperature Multi-effect Seawater Desalination EvaporatorsHOU Feng, ZHANG Shi, LIU Rui, et al (150)

Intelligent Fault Diagnosis of Bearings Based on Improved Stacked AutoencodersCHEN Guocheng, ZHANG Jian, JIAN Guanglei (156)

Analysis of the Influence of Skirt Board on Exterior Noise of Regional TrainsGU Hanxing, ZHANG Jie, ZHANG Kailin, et al (162)

Measurement and Analysis of Metro Noise Radiation of Different Track StructuresZHANG Qile, LIU Linya, CHEN Gaofeng (168)

Identification and Improvement of Internal Abnormal Noise Sources of Vehicles Based on Wavelet Time-frequency Partial Coherence AnalysisLI Hao, CHEN Changzheng, WANG Jie (173)

Test Research and Simulation Analysis of Shift Lever Vibration of MT VehiclesHUANG Chaohua, CHEN Zhiyuan, TIAN Zilong, et al (178)

Test and Analysis of Influence of Rail Corrugation on Ground Vibration of Curved TracksYANG Zhe, LEI Xiaoyan, LUI Qingjie, et al (182)

Analysis of Tunnel Reverberation Characteristics in Empty Filed and Vehicle ConditionsLIU Zhuohao, XIAO Xinbiao, LIU Moukai, et al (187)

Comparative Experimental Study on Vibration Law of Metro Track Based on 1/3 Octave Frequency and Transfer Function MethodYIN Huatuo, YUAN Yu, ZENG Zhiping, et al (193)

Research on Noise Control of Natural Ventilation Cooling Towers in a Thermal Power PlantMA Qishun, YAN Xiaozhong, LIN Richeng, et al (200)

Vehicle Impact Effect of Suspender in Half-through Arch Bridge Considering Vehicle-bridge Coupled VibrationHE Xuanbo, GUO Zengwei, XU Hua (206)

Flutter Stability Analysis of a Steel Truss Suspension Bridge Based on CFD and Wind Tunnel TestLAN Xianlin, ZHOU Liping, LIAO Bin, et al (214)

Low-frequency Vibration Insulation Characteristics of High-speed Train Profiles with Gyroscopic Phononic CrystalZHANG Xi, LIU Zhuohao, LI Chengcheng, et al (220)

Study on Low-frequency Sound Absorption Performance of Perforated Membrane and Loudspeaker Composed StructuresZHANG Peng, LI Xianhui, GAI Xiaoling, et al (227)

Study on Mechanical Characteristics of Rubber Roller Hulling Shock Vibration IsolatorYANG Yajun, LIAO Min, ZHANG Qiang, et al (232)

Study on Equivalent Source Configuration in Semi-space Near-field Acoustic HolographyJING Wenqian (238)

Impact Signal Detection of Diesel Engine Cylinder Based on Adaptive Combined Morphological FilterWANG Min, QIN Guojun, LIAO Yifang (244)

A New Method for Monitoring the Shaking Displacement of Wind Turbine TowersWANG Hua, MENG Huan, LI Ping (250)

Optimal Design and Application of 3D Finite Length Sound Barriers in EngineeringRUAN Xueyun, SHAO Liangyou, ZHANG Linke, et al (255)

Analysis and Control of Structural Noise of Outdoor Unit of Household Central Air-conditioningXIA Kai, LIU Yu, MEN Qunying, et al (260)

Analysis and Improvement of the Low-frequency Moan Noise of a SUV Disc BrakeZHANG Jun, WU Lianzheng, XU Huazhen, et al (265)