

哈船振控简介 HSVC Profile

哈尔滨哈船振动控制科技有限公司专注于高校产学研结合，与哈尔滨工程大学振动与噪声控制研究所合作，致力于打造专业的振动噪声控制设计咨询服务及减振降噪相关产品研发。

哈船振控以技术咨询、技术服务以及研发、生产、销售各类新型减振降噪产品为主，同时提供各类减振降噪工程的整体解决方案。

Harbin Ship Vibration Control Technology Co., Ltd. is a combination of industry, university and research institutes. It cooperates with the Harbin Engineering University's Institute of Vibration and Noise Control to carry out consulting service and product development in vibration and noise control area.

We are willing to offer technical consulting and service, research and development and sales of products relating to vibration and noise reduction, and also provide integrated solutions of vibration and noise reduction projects.



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旋转机械振动状态监测系统

The Vibration Condition Monitoring System for Rotating Machines

领先在线监测技术

Leading online monitoring technology

故障特征提取技术

Fault Feature Extraction Technology

哈尔滨哈船振动控制科技有限公司

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1. 概述 Overview

采用旋转机械振动状态监测系统，通过实时在线监测旋转设备瞬时转速，获取轴系扭振信号，能够避免突发性故障停机、保障旋转机械安全稳定运行。旋转机械振动状态监测系统由磁电传感器、数据采集处理模块、人机交互界面等硬件设备及信号处理与数据分析软件组成。

The vibration condition monitoring system for rotating machines is used to monitor the instantaneous rotation speed of the rotating machines in real time, and obtain the shaft torsional vibration signals, which can avoid sudden failure shutdown and ensure the safe and stable operation. The vibration condition monitoring system for rotating machines consists of magneto-electric sensors, data acquisition and processing modules, man-machine interactive screen and signal processing and data analysis software.

2. 产品介绍 Product introduction

2.1 人机交互界面 User-interface



主监控界面

Main monitoring interface



历史报警查询界面

Historical alarm query interface



参数设置界面

Parameter setting interface



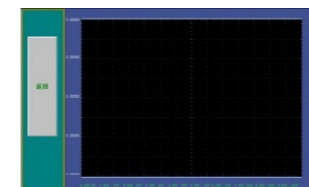
实时报警查询界面

Real-time alarm query interface



功能设置界面

Function setting interface



扭角频谱界面

Twist angle spectrum interface

2.2 技术特点

工业现场数据采集

- * 标准化工业现场传感器、数据接口
- * 模拟电路、微小信号采集
- * 硬件滤波与抗干扰设计
- * 多通道同步采集

Industrial field data collection

- * Standardized industrial field sensors, data interfaces
- * Analog circuit, small signal acquisition
- * Hardware filtering and anti-interference design
- * Multi-channel simultaneous acquisition

工业通讯设计

- * OPC通讯协议
- * 标准协议：Modbus RTU/TCP、CAN、RS232等
- * 自定义安全通讯协议

Industrial communication design

- * OPC communication protocol
- * Standard protocol: Modbus RTU/TCP, CAN, RS232, etc.
- * Custom secure communication protocol

信号分析

- * 专业化的信号滤波算法
- * 先进的振动特征信号提取技术
- * 基于嵌入式DSP的振动信号计算阶比跟踪技术

Signal analysis

- * Specialized signal filtering algorithm
- * Advanced vibration characteristic signal extraction technology
- * Ordering tracking technology for vibration signal calculation based on embedded DSP

3. 优势 Advantages

---专业、稳定、高效、便捷/ *Professional, Stable, Efficient and Convenient*

实时监控、提前报警

——人机交互界面提供“运行”和“报警”两种工况，操作人员可以轻松掌握设备运行状态

Real-time monitoring and early warning

---Man-machine interactive screen offers two working conditions: “Run” and “Warning”, and the operators can easily catch the running state of the machines.

现场监测、远程监测同步

——借助卫星通信技术，监测数据可同步传输至控制中心，方便调度人员随时监控设备工作状态

On-site monitoring and remote monitoring

---With the satellite communication technology, the monitoring data can be transmitted to the control center synchronously, which is convenient for dispatchers to monitor the working state of the machine at any time.

长期监测机械设备健康状态

——长期实时监控，让微小故障无处遁形，确保旋转设备稳定运行

Long-term monitoring of the health of rotating machine

---long-term real-time monitoring doesn't allow any small fault, and ensures stable operation of rotating machines.

4. 应用领域 Applications

旋转机械振动状态监测技术不仅适用于各类船舶动力装置，还可广泛用于电站、油田等领域等设备的在线监测。

The vibration condition monitoring technology for rotating machines is not only applicable to ship power devices, but also widely used to online monitoring of equipment such as power plant, oil and gas industry.

服务对象 Application service object :

* 柴油机

* Diesel

* 工业汽轮压缩机

* Industrial turbine compressor

* 泵组

* Pump set

* 燃气轮机发电机组

* Gas turbine generator set

* 汽轮机发电机组

* Steam turbine generator set

* 齿轮箱

* Gear box