A

小波变换在松动件检测系统报警中的应用研究

@方力先$杭州电子工业学院!浙江杭州 310012 @楼永坚$杭州电子工业学院!浙江杭州 310012 @倪益华$浙江大学机械系!浙江杭州 310027 @陈仲义$浙江大学机械系!浙江杭州 310027

摘要 研究了小波变换在松动件检测系统(LPMS)报警中的应用。在分析LPMS中产生误报主要原因的基础上,结合小波时 频域分析特点,提出了基于小波均方值报警理论,并以秦山核电站一号机组为例,选择相对噪声较小的尺度作为报警基准,能有效地抑制背景噪声对报警的影响。该文提出的RMS阈值和RMS时间宽度阈值的双阈值小波报警算法,使得报警更加可靠。

关键词 松动件检测系统 小波变换 报警

分类号 TB112

扩展功能

本文信息
▸ Supporting info
▸ [PDF全文](326KB)
▸ [HTML全文](0KB)
▸ 参考文献

服务与反馈
▸ 把本文推荐给朋友
▸ 文章反馈
▸ 浏览反馈信息

相关信息
▸ 本刊中 包含"松动件检测系统"的相关文章
▸ 本文作者相关文章

Application Study on Wavelet-transformation to Alarming in Loose Parts Monitoring System

FANG Li-xian~1, LOU Yong-jian~1, Ni Yi-hua~2, CHEN Zhong-yi~2 (1.Hangzhou Electric Institute,Hangzhou 310012,China; 2.Zhejiang University,Hangzhou 310027, China)

Abstract The application of wavelet-transformation to alarming in loose parts monitoring system (LPMS) was studied. On the base of analyzing the main factor to the erroralarming in LPMS,the alarming theory in view of wavelet's RMS was established by choosing minor scale of relative noise as alarming datum point,and the base noise which affect alarm was checked effectively.Moreover RMS threshold and time width RMS threshold wavelet alarming algorithm were adopted,all make the alarm more dependable.

Key words loose parts monitoring system wavelet-transformation alarming

DOI

通讯作者