

Article Abstract

Title:	Fault diagnosis in gear using wavelet envelope power spectrum
Author(s):	M. Loksha ^{1*} , Manik Chandra Majumder ² , K. P. Ramachandran ³ , Khalid Fathi Abdul Raheem ⁴
Address(es):	^{1, 3, 4} Department of Mechanical Engineering, Caledonian College of Engineering, OMAN, ² Department of Mechanical Engineering, National Institute of Technology, Durgapur, INDIA, Corresponding author: lokjay251@yahoo.com, Tel: +968-9236 8754
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Abstract:	In recent years, improvement has been achieved in vibration signal processing, using wavelet analysis for condition monitoring and fault diagnosis. The use of wavelet analysis has proven to be efficient to detect faults in vibration signals with non-stationary, transient characteristics/ components. An experimental data set is used to compare the diagnostic capability of the fast Fourier transform power spectrum to the wavelet envelope power spectrum as respectively computed using Laplace and Morlet wavelet functions. The gear testing apparatus was used for experimental studies to obtain the vibration signal from a healthy gear and a faulty gear.
Keywords:	Fast Fourier transform, Continuous wavelet transform, Envelope power spectrum, Wavelet.