

Application of Wavelet Transform for Fault Diagnosis in Rotating Machinery

H. Bendjama, S. Bouhouche, M. S. BOUCHERIT

Abstract: Vibration analysis is essential in improving condition monitoring and fault diagnostics of rotating machinery. Many signal analysis methods are able to extract useful information from vibration data. Currently, the most of these methods use spectral analysis based on Fourier Transform (FT). However, these methods present some limitations; it is the case of non-stationary signals. In the present work, we are interested to the vibration signal analysis by the Wavelet Transform (WT). The WT is one of the most important methods for signal processing; it is especially suitable for non-stationary vibration measurements obtained from accelerometer sensors. The monitoring results indicate that the WT can diagnose the abnormal change in the measured data.

Keywords : Vibration analysis, Fault Diagnosis, Rotating machinery, Spectral analysis, Wavelet transform