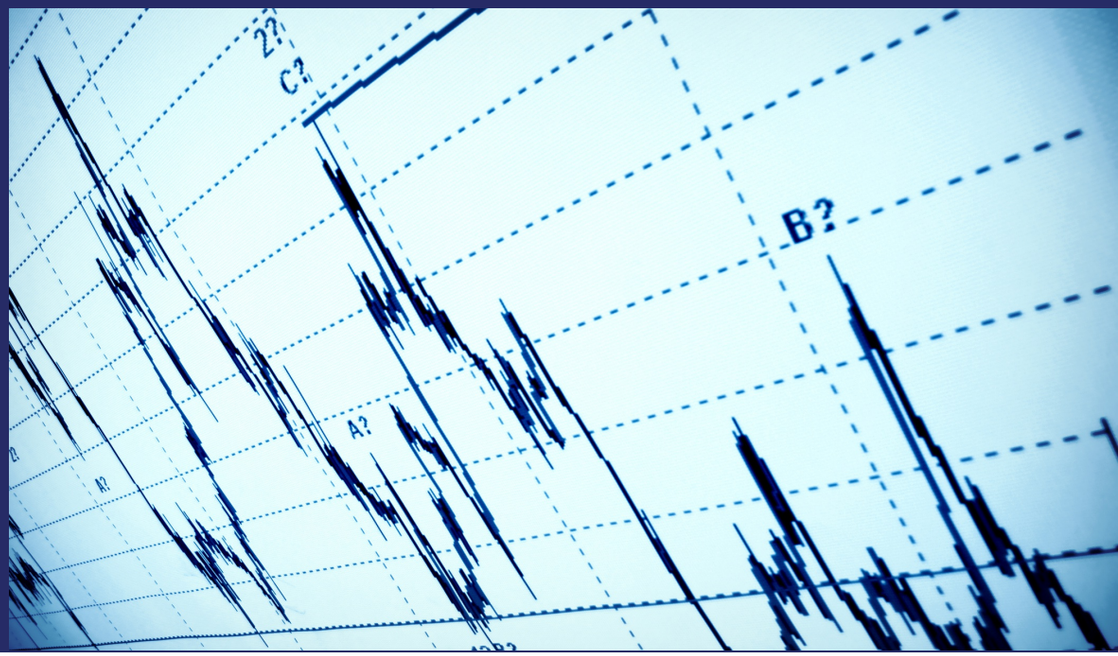
Condition-based maintenance (preventive, predictive, on-line) requires some means of assessing the actual condition of the equipment/machinery in order to optimally schedule the maintenance. Early failure of machinery can often be detected using condition monitoring techniques. A continuous Machine Condition Monitoring (MCM) is needed to monitor the system to capture the real time data from the equipment under test such as rotating and reciprocating machinery for a condition based maintenance scheduling. The differences between the actual and desired performance behavior allow the operators to predict and identify the problems before they cause the equipment to fail thereby reducing the catastrophic failures and the consequences. While vibration monitoring is still the prime factor for the early detection of problems with rotating machinery the track of temperature, rotational speed and motor flux equally find important for machine condition monitoring. The more sophisticated software such as LABVIEW helps to improve the capabilities of vibration-monitoring systems. An example is National Instruments Sound & Vibration Assistant that divides the frequency spectrum into specific ban



Chockalingam Aravind Vaithilingam
R Dhanasekaran
Chan Wei Yip

Health Monitoring of Electrical Machines

Dr. Aravind is a professional Chartered Engineer registered with the Engineering Council UK. He holds doctoral degree in electrical machine with the research work earning the coveted gold at the Malaysian Technology Expo 2013. He is the author of over 200 reviewed work, 6 text books and 7 registered patents.

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