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Analisis Pengaruh Misalignment terhadap Vibrasi dan Kinerja Motor Induksi

Andi Ulfiana, author

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Abstrak

Vibrasi akibat misalignment pada motor induksi dideteksi menggunakan sensor Micro-Electro-Mechanical System (MEMS) dan piezoelektrik. Pengukuran dilakukan saat kondisi alignment dan misalignment. Sinyal vibrasi ditampilkan menggunakan LabVIEW melalui Data Aquisition (DAQ) Card. Dilakukan pengamatan tegangan, arus, daya listrik dan putaran motor. Analisis vibrasi dilakukan dengan mengamati amplitudo dan frekwensi sinyal untuk kondisi alignment dan misalignment. Analisis vibrasi dilakukan menggunakan Fast Fourier Transform (FFT), Short Time Fourier Transform (STFT) dan Wavelet Transform (WT). Dilakukan perbandingan konsumsi energi saat alignment dan misalignment.

.....Vibration caused by misalignment of induction motor is detected by using Micro-Electro-Mechanical System (MEMS) and piezoelectric sensor. Measurement is done with alignment and misalignment. Vibration signal is presented by using LabVIEW trhough Data Aquisition (DAQ) Card and by monitoring variable of, voltage, current, electric power and motor speed. Vibration analysis is done by perceiving frequency and amplitude of signal with alignment and misalignment. Vibration analysis is done by using Fast Fourier Transform (FFT) and Wavelet Transform (WT). Calculation of energy consumption is done with alignment and misalignment.