ABSTRACT

ANALYSIS VOICE SIGNAL OF THE COMPRESSOR ENGINE TO CHARACTERIZING DECREASE QUALITY OF LUBRICANT USING FAST FOURIER TRANSFORM (FFT) METHOD

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The research of sound signal frequency for analysis of viscosity lubricant compressor machine, the determination relationship of sound frequencies compressor on lubricant value, has been conducted by Fast Fourier Transform (FFT) method. The eight samples taken from the lubricants Honda Beat matic motor with a viscosity value of 7.5058 Ns / m² up to 8.8790 Ns / m². The analysis of sound frequencies compressor machine was performed on four areas of compressor machine, consist of compressor lubricants, piston and cylinder, motor, and air tube compressor machine areas. The results from each areas compressor machine was shown in the spectrogram spectrum, then they were analyzed for frequency ranges that exist in each recording time. The dominant frequency of the frequency range spectrogram results can be determined by FFT method. The frequency results of four compressor areas were random, although viscosity values was decreased.

Keywords. Compressor, fast fourier transform, frequency, spectrogram.