

FAULT DIAGNOSIS OF SINGLE STAGE SPUR GEARBOX USING NARROW BAND DEMODULATION TECHNIQUE: EFFECT OF SPALLING

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ABSTRACT

Fault detection and diagnosis of gear transmission systems have attracted considerable attention in recent years, due to the need to decrease the downtime on production machinery and to reduce the extent of the secondary damage caused by failures. This paper deals with fault diagnosis of a spur gearbox having spalling defect in driver gear using narrow band demodulation technique through MATLAB software. For this an experimental setup is fabricated. The vibration signals are captured from the experiments and the burst in the vibration signal is focused in the analysis and the frequency of the faulty gear is found out.

KEYWORDS: Gears, Fault Diagnostic, MATLAB, Narrow Band Demodulation, Power Spectral Density