

عنوان مقاله:

Gear Fault Diagnosis via Non Stationary Adaptive MARTIN Distance

محل انتشار:

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خلاصه مقاله:

In this paper, we have proposed a new method of gear fault diagnosis, based on combination of time synchronous averaging method, non-stationary ARMA model and Martin distance. This method has three major steps. In first step a time synchronous averaging method has been proposed for averaging gearbox signal. Second step deals with selection of proper ARMA model of signal produced by gearbox and using adaptive filter (with weighted least square algorithm) for identifying time-varying parameters of the model. In last step, a new non-stationary distance has been defined for gear fault diagnosis. The proposed distance is extension of Martin distance. The proposed method has been used on YAMAHA gearbox for identifying the gear fault. The results of diagnosing are satisfactory.

کلمات کلیدی:

Gearbox Fault - Time Synchronous Averaging - ARMA Model - Adaptive Filter - Martin Distance

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