عنوان مقاله:

A PracticalWork for Fault Classification of Electromotor of SAR-2 Hydraulic Pump by an Intelligent Combined Method Based on Data Mining and Fuzzy Logic

محل انتشار:

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خلاصه مقاله:

Vibration technique in a machine condition-monitoring program provides useful reliable information, bringing significant cost benefits to industry. The main purpose of this research is to explore the intelligent way to classify three common faults versus healthy state of electromotor. Vibration signal by FFT technique went to frequency domain. Then the features are extracted by using statistical feature parameters that reduced the data. The improved distance evaluation (IDE) technique was used to select the significant features from the whole feature set. The J48 algorithm as a decision tree generated fuzzy rules. The structure of the FIS classifier was then defined based on the crisp sets. Results showed that the total classification accuracy were about 88%. This work demonstrates that the combined J48-FIS model has the possible capacity for fault diagnosis of electromotor.

کلمات کلیدی:

Electromotor, Fault diagnosis, Feature extraction, Signal processing, Vibrations

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