

عنوان مقاله:

Fault Diagnosis of Electromotor of SAR-7 Hydraulic Pump by an Intelligent Combined Method Based on k-Nearest Neighbor and Improved Distance Evaluation

محل انتشار:

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خلاصه مقاله:

In present paper, an electro-motor of a Search and Rescue (SAR-7) is studied by its frequency domain signals. Vibration Signals gained from electro-motor while its daily work. Some statistical parameters are used for data mining from raw signals and the Improved Distance Evaluation (IDE) technique is used for feature extraction. Variant thresholds for IDE are used to study the effect of this feature selection algorithm on overall performance of classification by k-Nearest neighbor (kNN) algorithm. Variable k value is used in order to make effect of IDE independent from classifier settings. Behavior of kNN performance depending variable k value between 1 and 10 is like descending linear function. As results, IDE made calculations faster and increased overall performance for fault classification with kNN.

کلمات کلیدی:

Fault diagnosis, Feature extraction, Feed forward neural networks, Signal Processing, Vibrations

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