

## **Belt Fault Detection using Artificial Intelligence**

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### **Abstract**

This paper is presented the fault characterization of belt drive system using artificial neural networks (ANN) and support vector machines (SMV). The time-domain vibration signals of a rotating machine with normal and defective belts are collected and processed for features extraction. The experimental data is used to characterize between the faulty and healthy classes. The procedure is illustrated using the experimental vibration data of a rotating machine. The roles of different vibration signals and signal preprocessing techniques are investigated. The results show the effectiveness of ANN and SVM in characterization the faulty classes based on vibration signals.