

# **Fault Diagnosis in Rotating Machinery Using Pattern Recognition Technique**

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## **ABSTRACT**

*This paper presents a detail review of fault diagnosis in rotating machinery. Pattern recognition technique which needs three main steps of fault diagnosis – feature extraction, dimensionality reduction and fault classification – was used. This paper focuses on the faulty bearing which is mainly caused by mass imbalance and axis misalignment. By analyzing the vibration signal obtained from the test rigs (rigs that are built to demonstrate the effect of faults in rotating machinery), it gives solid information concerning any faults within the rotating machinery.*

**Keywords:** *Bearing fault, mass imbalance, misalignment, fault diagnosis, pattern recognition technique*