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CMB Ready Condition-Based Monitoring

CONDITION-BASED MONITORING (CBM) IS A TYPE OF PREDICTIVE MAINTENANCE THAT INVOLVES USING SENSORS TO MEASURE THE STATUS OF AN ASSET OVER TIME WHILE IT'S IN OPERATION.

The data collected can be used to establish trends, predict failure, and calculate remaining life of an asset. With CBM, rather than perform maintenance at specified intervals like with preventive maintenance, maintenance can be optimized by only performing it when the data shows that performance is decreasing or a failure is likely. This also reduces the risk of undetected early component failure.

BENEFITS

Condition-based Monitoring has a number of benefits:

- It works while the equipment is in service, and does not interrupt equipment operations.
- It can help ensure equipment reliability and worker safety.
- It reduces failure rates and unscheduled downtimes.
- It may help lower the costs of maintenance compared to preventive maintenance, as the maintenance activities are schedule ahead of time.

SYSTEM OUTLINE

The system setup consists of multiple layers. The base layer is included and handles the data collection of the available sensors on the KenzFigeer equipment. The other layers are optional and are built on top of the base layer and will create and report the maintenance analysis.

Base: The Base layer is a service that makes KenzFigeer equipment CBM Ready. The available measurements and events are logged by a separate data logger and send automatically or manually to KenzFigeer data center.

Level 1: Detailed reports are made available. Based on the measurements of the equipment, the theoretical lifetime of the major elements are re-evaluated based on actual operation.

Level 2: KenzFigeer offers a CBM system based on vibration measurement on bearings of rotating equipment. The vibration data from the main machinery is sent over to the server periodically –or as required- for data analysis. Data analysis will be performed by KenzFigeer according to ISO 10861 guidelines. The vibration data of the Machinery retrieved will depict the condition such as, but not limited to, pollution, mechanical wear, imbalance and lubrication.

Level 3: The crane operator will have real-time access to the lifetime and vibration information, which will be provided in a dashboard, integrated in the crane Human Machine Interface (HMI). The dashboard will give insight in the overall expected lifetime of the equipment. Warning messages will indicate upcoming maintenance or a sudden drop in performance.

KenzFigeer would be pleased to discuss our flexible options for periodic condition analysis updates, as well as combinations with any type of related maintenance services.