EMPOWERING MAINTENANCE

SAM AI'S AUTOMATED ALARM THRESHOLD CONFIGURATION

SAM AI is fully loaded with proprietary AI algorithms. It uses all the calculation power embedded in nowadays computers to investigate vibration behavior over time. Using unsupervised machine learning algorithms it can detect and flag any slight change in assets dynamic behavior, and locate precisely its origin.


One of the crucial aspects of running a Condition Monitoring (CM) program is setting up alarm thresholds for detecting anomalies.

In a typical plant with 200 machines, this involves creating over 50,000 threshold levels in the database.

Without tools for automated alarm definition, this task can become so burdensome and time-consuming that end users often give up on it alltogether, forcing them to manually sit through all collected data and hunt for non-existing problems.

Moreover, those who endure this tedious process once are likely to never repeat it.

Consequently, many industries still use outdated thresholds set up years ago, which no longer reflect the current behavior of their assets.

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SAM AI revolutionizes this process by facilitating both the automated and manual insertion of user-defined alarm packs, whether on a global (entire DB) or partial scale (Machine or Group of Machines), especially when historical data is lacking. Beyond simple automation, it leverages Artificial Intelligence to extract normal vibration behaviors from historical data -once available-, establishing reference vibration signatures and setting alarms accordingly.

This AI-driven approach quickly identifies and eliminates abnormal dynamic behaviors, both high and low, enabling accurate estimations of normal vibration patterns.
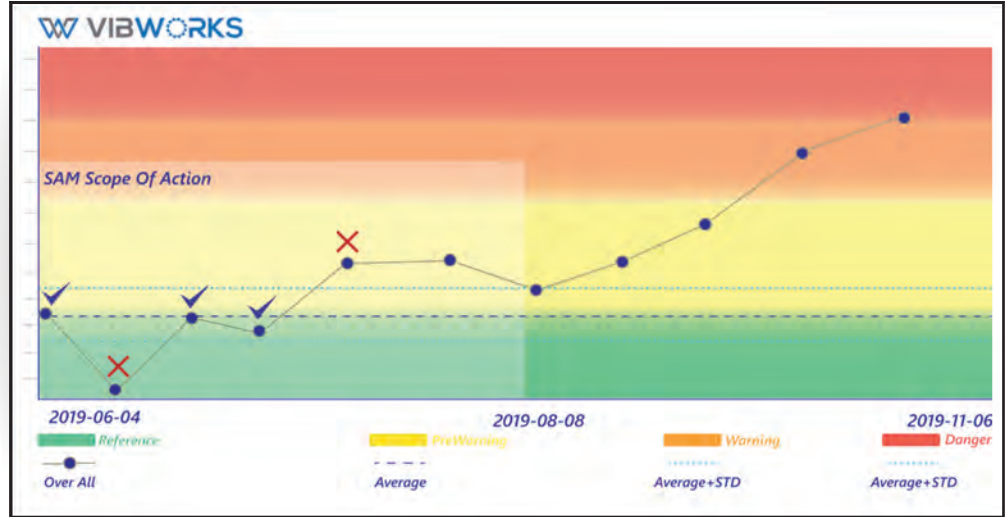
50000 THRESHOLD PER SEC

Despite the extensive calculations, statistical analyses, and database interactions required, the entire process is highly optimized. Alarm settings, including data extraction, analysis, and threshold updates via AI, occur at a remarkable rate of 50,000 thresholds per second—not per minute.

This rapid application ensures the alarm system can be updated within seconds across the entire plant making it a dynamic and easily adaptable process following any changes to the assets, such as component replacements, refurbishments, bearing changes or any type of machine repair.

TRANSFORMING DARKNESS INTO COLORS, INSTANTLY

BEFORE

AFTER

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