


LCM: Your expert for tailor-made

CONDITION MONITORING

Cloud-based visualization of cement mill parameters and conditions / Credit: Technikum at Cemtec ▼



FROM THE IDEA...

-  Definition of requirements
-  Feasibility analysis
-  Implementation plan
-  Data acquisition system
-  Algorithm development
-  Prototype



...TO THE PRODUCT

With smart components for data-driven condition analysis and AI-supported fault detection, the research and development service provider LCM supports the integration of flexible and practical condition monitoring systems.

A well-designed condition monitoring system allows for the optimization of maintenance cycles and for the prevention of unplanned production downtimes. These measures may significantly reduce the production costs.

Reliable condition monitoring and fault detection of machines and systems come with many challenges.

As experts for condition monitoring and predictive maintenance, we support plant operators with technological know-how, solution-oriented concepts and tailored measures.

The „Step by Step“ Implementation of Condition Monitoring

WHAT A COOPERATION WITH LCM LOOKS LIKE

At LCM, we pursue an ambitious goal: to provide our customers with a solution that is precisely tailored to their needs. To meet this demand, we follow a proven strategy:



FEASIBILITY ANALYSIS

For us, the basis of a project is a feasibility analysis. In this, we evaluate the current status together with the customer, create a catalog of errors and define the expected added value of an optimized Condition Monitoring system.



IMPLEMENTATION PLAN

Based on this analysis, we develop a concept with an individual implementation plan, which includes all the necessary measures. Throughout the project, the essential milestones are evaluated and the further course of action may be adjusted based on the insights gained.



DATA ACQUISITION SYSTEM

The start of the implementation phase is usually made with an initial data recording using laboratory measuring equipment. By using standard sensors, we establish a data base to explore the real chances of success of the project with minimal disruption to daily opera-

tions. On this foundation, specific algorithms can subsequently be developed, and missing hardware components (e.g., additional sensors) can be designed.



ALGORITHM DEVELOPMENT

The next step already moves towards product pre-development. For this purpose, we create product-like functional prototypes that are subsequently tested (e.g., on test benches or a pilot plant). Based on the data obtained, the algorithms used can be optimized



PROTOTYPE

If these test results meet expectations, we initiate the industrialization process in the final project phase and assist our customers in finding the right manufacturer for the certification and sustainable realization of the final product.

YOUR PROFIT THROUGH CONDITION MONITORING

With condition monitoring, plant operators can sustainably increase the efficiency, service life and production quality of machines while reducing costs and resource usage. As a leading provider of R&D services, we are happy to develop a specific solution tailored for your needs and efficiently integrate cutting-edge technologies profitably into your operational environment.