SPINDLE HEALTH MONITORING SYSTEM

A Revolutionary Tool to Monitor Spindle Health With AI Technology

Integration of Advanced Data and Analytic Technology for Creating Accurate Spindle Life-Cycle Models

By utilizing Edge computing and data analytics, a unique spindle model is created for each machine. A proprietary algorithm has been developed during Mazak's collaboration with the **Center for Intelligent Maintenance Systems (IMS) at the University of Cincinnati**. The algorithm can accurately predict the current spindle condition and display it in an easy-to-read format. The spindle health is updated during each fixed-cycle test, which is triggered as often as the user sees fit.
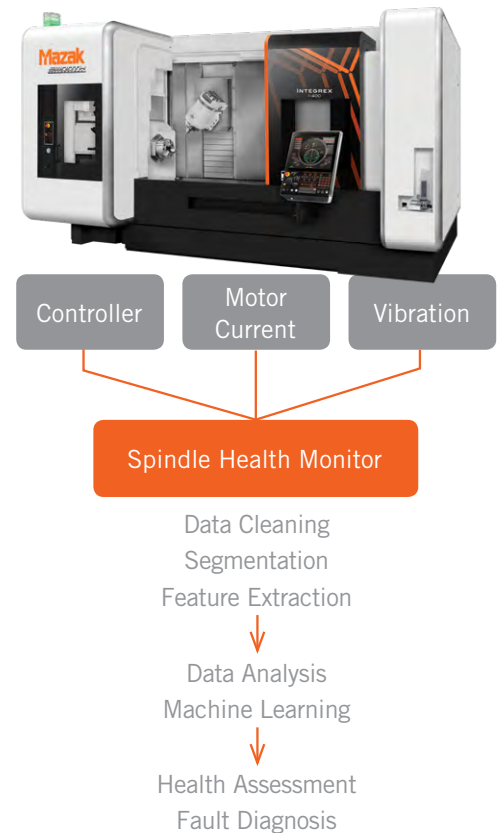
MINIMIZE MACHINE DOWNTIME USING AI TECHNOLOGY

The Mazak Spindle Health Monitoring System uses AI technology to allow machine owners to see spindle issues before complete failure. Spindle maintenance or replacement can be scheduled based on current spindle condition to minimize unpredicted machine downtime.

A COMPLETE MAZAK SOLUTION

Mazak will offer even higher quality service with this new system, which can ship a replacement spindle in advance of complete failure.
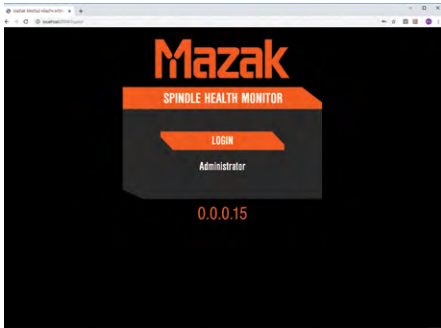
EASY TO USE

Operators can run the health check macro program, which takes approximately one minute between production programs, as often as needed. The system collects data during a spindle fixed-cycle free-running test. No technical knowledge of data analysis or AI technology is required.
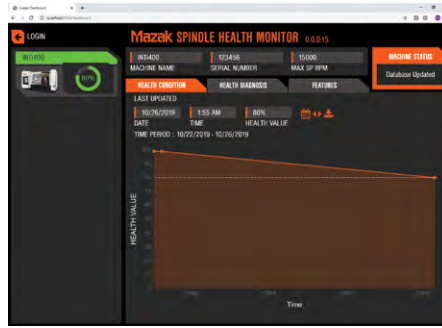
Controller | Motor Current | Vibration

Spindle Health Monitor

Data Cleaning
Segmentation
Feature Extraction

Data Analysis
Machine Learning

Health Assessment
Fault Diagnosis

Learn more about Spindle Health Monitoring and your easy, secure entrance into IIoT technology by contacting us at (859) 342-1700.
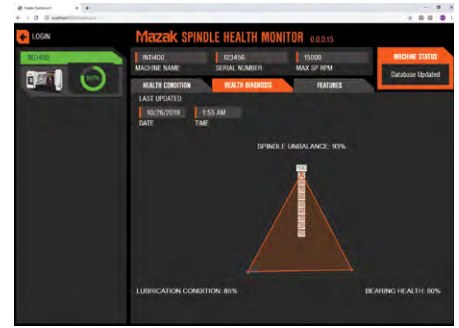
Mazak

Login

Health Condition

Health Diagnosis

SIMPLE WEB APPLICATION

This is a non-cloud-based stand-alone AI system that does not require a separate display. Instead, the Spindle Health Monitor screen can be viewed on the MAZATROL Smooth CNC or any devices in the same network.

Product images are for illustration purposes only and may not be exact representations of the products.
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The Center for Intelligent Maintenance Systems at the University of Cincinnati

The IMS Center is internationally recognized as the leader in predictive analytics and industrial big data modeling for life cycle performance of industrial systems. As the world's pre-eminent NSF Industry/Univerity Cooperative Research Center, the IMS Center is often the first to introduce new concepts and technologies to the research and industry communities.

www.imscenter.net