

FULLER[®]



ONLINE RELIABILITY SERVICES

FOR EV IMPACT HAMMER CRUSHERS

MONITORING AND EXPERTISE TO IMPROVE HAMMER CRUSHER PERFORMANCE AND AVOID UNPLANNED DOWNTIME

A hammer crusher's job is tough. In a single pass, it reduces run-of-mine limestone, often containing large boulders, into a mill feed of particles measuring no more than 25mm. This heavy-duty application raises challenges for the equipment. However, failure is not an option, causing production delays, increased costs, and quality issues.

Our Online Reliability Service for hammer crushers enables early identification of potential issues before they escalate.

Multiple sensors installed on your crusher transmit real-time data to our Global Remote Service Centre, where specialists continuously monitor the equipment for process abnormalities, component failures, and other operational deviations. By applying early-warning analysis techniques, including Rule Based methods, Condition Based monitoring,

Artificial Intelligence and Machine Learning (AI/ML), and custom-created models, we identify when equipment failures may occur and recommend the appropriate corrective actions to optimize your crusher's performance.

KEY BENEFITS

01

Increase uptime
and output.

02

Gain fuel and
power savings.

03

Lower labor costs by
transforming unplanned shutdowns
into planned ones.

04

Extend equipment lifespan with
improved preventive maintenance.

05

Reduce premium costs and services
by having the right spares on
site at the right time.

06

Return of investment:
3 months

EV IMPACT HAMMER CRUSHER

Motor

- Rotor Failure (broken/cracked rotor bar Imbalance, broken/cracked rotor bar, loose, bow)
- Bearing failure (subcomponent, rotational looseness, lubrication problems, cocked)
- Structural looseness
- Stator failure (eccentricity, soft foot, phase loss, windings problem)
- Misalignment
- high/low temperature

Gear

- High gear temperature

Coupling

- Axial and radial run out

Apron Feeder

- VFD failure
- Ripped main shaft

Crusher

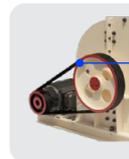
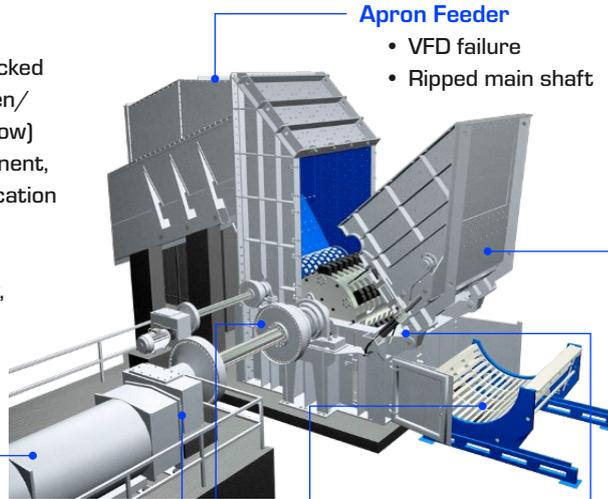
- Bearing failure (subcomponent, rotational looseness, cocked, lubrication problems, high/low temperatures)
- Structural looseness
- Broken hammer or other parts
- Damaged rotor or grate bars or breaker plates
- Overload
- Hopper over/un filling
- Hopper uneven feeding

Outlet Grate

- Outlet grate-wear

Hydraulics

- Breaker plates opening



Belt

- Belt looseness and slippage
- Belt tensile failure

The OEM expert advantage

Many providers offer to monitor your equipment, but do they truly understand your crusher? We have decades of experience installing, troubleshooting, maintaining, and optimising our hammer mills. We have integrated that OEM experience and insight into our ORS. So, while others tell you what to worry about, we tell you how to solve recurring problems and enhance reliability. This includes extensive root cause analysis to prevent minor issues from escalating into major problems.

After all, your success is our success. Our OEM expert advisors support and coach your maintenance personnel to achieve excellence, delivering optimized maintenance planning and effective maintenance procedures.

A comprehensive monitoring package

Our ORS uses existing control system signals to identify common issues, such as over- and underfilling, component damage, bearing and drive failure, and overheating gears and bearings. On top

of this, we provide additional monitoring systems, such as vibration, optics, image processing, electromagnetic, ultrasonic, and oil analysis, to detect a broader range of abnormal conditions and component failures, delivering continuous insight into your hammer mill's status.

Implementing ORS

A Fuller project manager will oversee the delivery of any hardware required to provide the service. Your maintenance team will usually be able to install the sensors themselves; however, we can offer installation as an optional extra. After the Health and Usage Monitoring System (HUMS) is installed, we will come to you and commission the systems. Once commissioning is complete, the project manager will hand over to a dedicated service account manager, whose job is to support your maintenance department as their go-to contact whenever assistance is needed. The service account manager will initiate and drive the service to deliver on your KPIs, ensuring that you receive optimal value.

HOW DOES ORS WORK?

