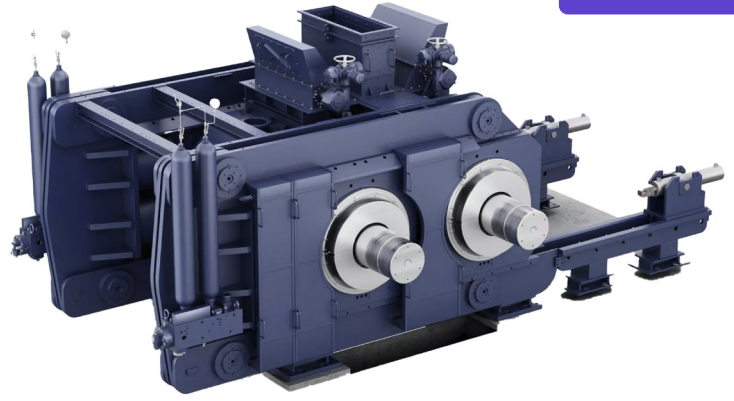


# Revitalizing Roller Press Longevity: Real-Time Resilience with AI Expert Saves \$150,000 in Cement Manufacturing.



## Operational Challenges

Even with the implementation of a distributed control system (DCS), early alerts continue to be elusive until reaching critical junctures. Faced with frequent breakdowns, costing significant losses due to downtime, a global cement manufacturer was looking for a predictive maintenance solution to solve these challenges.

## Solution with UptimeAI Expert:

- Unlike Distributed Control System (DCS), which uses a threshold-based alarm, UptimeAI's "AI Expert" uses deep learning models and built-in failure modes to detect operational issues early before causing any losses. UptimeAI also seamlessly integrates with your current Operational Technology (OT) stack, including maintenance systems such as SAP PM, to assess issues holistically and identify the root cause.
- Often, changes in operating parameters are not too significant to be picked by a DCS or would take anywhere from a few hours to days before coming to the attention of plant operators. Further, quickly identifying the cause requires skilled technicians, sometimes at the plant, a challenge with the retiring workforce and remote employees.
- In this scenario, UptimeAI's solution rapidly detected anomalies: the bearing temperature of the fixed roller at the non-drive end (NDE) deviated from established norms, while the lube oil temperature exhibited unusually high readings. Analyzing a comprehensive array of

22 parameters, including bearing temperature, cooling water delta T, lube oil flow, pressure, and temperature, AI Expert swiftly pinpointed an issue-fouling within the cooler-hindering efficient lube oil heat transfer and consequently elevating bearing temperatures-a potential precursor to bearing damage.

Promptly responding to AI Expert's early warnings and recommendations, the client switched to a secondary cooler. As a result, lube oil temperatures normalized, subsequently reducing bearing temperatures and mitigating potential damage risks saving over \$150,000 in repair costs and downtime.

UptimeAI's unique combination of AI and subject matter knowledge mimics experts by continuously learning without manual rules and explaining complex problems to help mitigate issues. The deep learning techniques learn good vs. bad behavior considering all the operating parameters, while built-in fingerprints with failure modes, recommendations, and fault-tree analysis enable the solution to

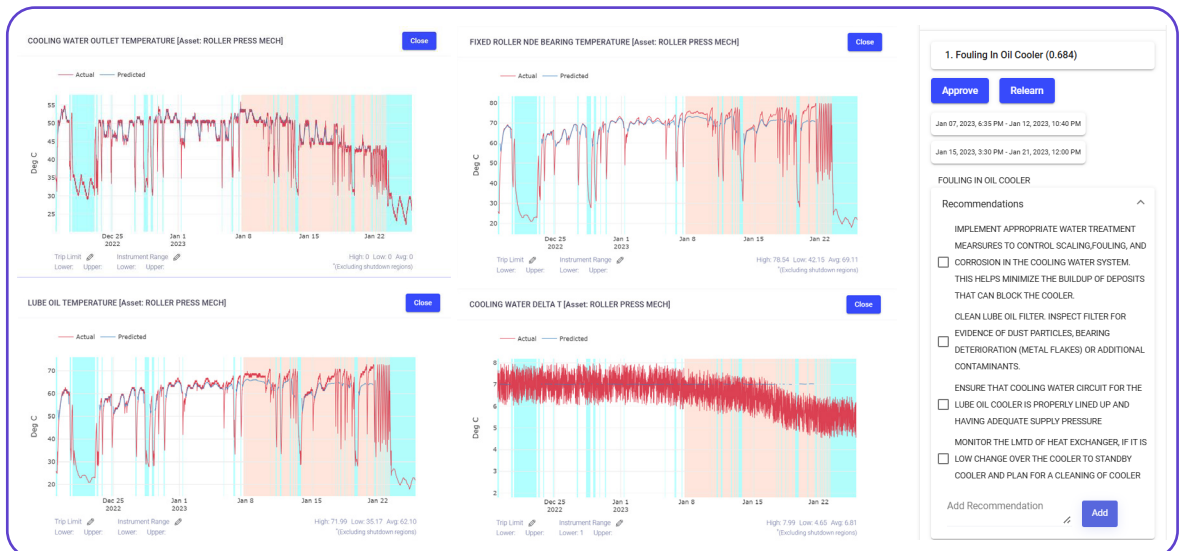
### Summary

Estimated Savings  
\$150,000

Systems Models  
1

Deployment Time  
2 Hours

Number of Tags  
22



## About UptimeAI:

UptimeAI uniquely combines Artificial Intelligence with Subject Matter Knowledge from 200+ years of cumulative experience to explain interrelations across upstream/downstream equipment, adapt to changes, identify problems, and give prescriptive diagnosis like a human expert would.

UptimeAI Expert OEx Platform works as a trusted AI advisor for plant engineers looking to achieve operational excellence.

For more information visit: [www.uptimeai.com](https://www.uptimeai.com) or email us: [info@uptimeai.com](mailto:info@uptimeai.com)