Use Case

Determine Health Status of Pump

NEED

- Develop a holistic understanding of all factors impacting battery quality
- Better control maintenance requirements
- Create a stronger connection between operations

OUTCOMES

- Improved maintenance cycles of equipment
- Less unplanned downtime
- Improved overall equipment efficiency

CUSTOMER: Leading Manufacturer of Primary Batteries

CHALLENGES

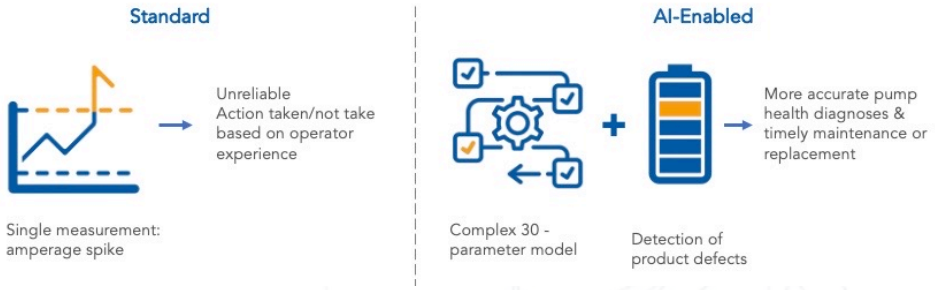
- Change Management: Cross departmental collaboration between operations and plant maintenance required, which traditionally function independently of each other, but data generated in one area can inform the other and lead to improvements
- Technical: Make pump failure prediction more reliable and develop a robust maintenance schedule that optimizes maintenance activities during planned downtime.

SOLUTION

An AI model that links data from quality control and maintenance to generate a holistic picture of pump health that allows the customer to catch emerging issues earlier.

PROCESS

- Collection of IoT data from various sensors, cleansing and aggregation of the data
- Development of a 30-parameter pump health model with defect detection data from QC fed into the model. The model was trained to detect anomalies and deployed to the shopfloor



The health status of the slurry pumps is traditionally monitored via a single measurement, i.e. an amperage spike. If a spike occurs the operator acts based on experience, an unreliable process that leads to pump failures and unplanned line downtime.
The AI-based defect detection model performs accurate diagnoses allowing for timely maintenance

Contact

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