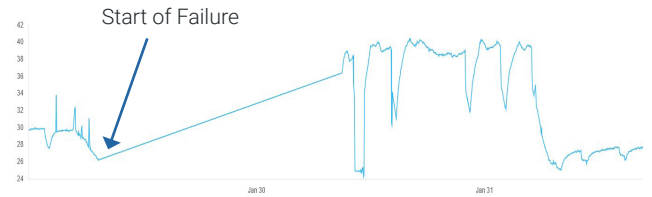
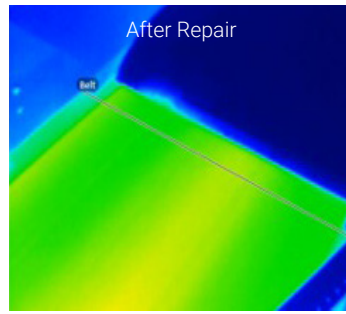
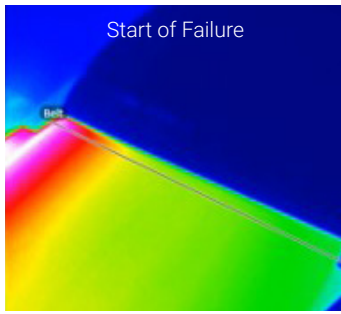


Case Study: Conveyor Belt in Multinational Retailer's Fulfillment Center

Tray router discharge identified by MSAI Connect



TIMELINE OF EVENTS

MSAI Connect detected a steady rise in heat on the tray discharge belt creating a critical maintenance alert. Upon inspection, the belt had tracked to the left, over the knife roller and was rubbing up against the side guarding and over the tracking unit on the underside of the belt. As this belt is fed from the Tray router Main Motor it would have ripped the belt off as no overload would have been detected as per the design.

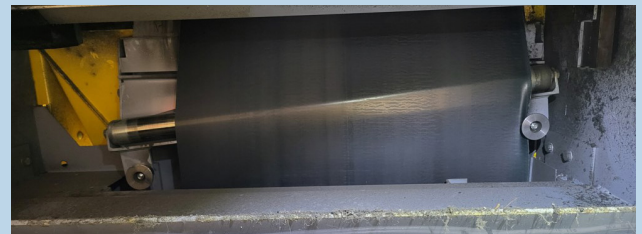
ACTIONS TAKEN

An inspection window was agreed upon, resulting a short period of downtime, as the belt's failure was imminent. The reliability team was able to diagnose and correct the root cause of the belt misalignment, allowing operations to resume less than an hour after the MSAI Connect alert.

POTENTIAL IMPACT

MSAI Connect was able to identify the issue immediately, avoiding failure of the belt and associated downtime. Realized downtime was one hour instead of four hours, had the belt failed, netting in a three hour increase in operational uptime.

- **The avoided cost of replacing the belt was \$6,500**, had the hotspot not been caught by MSAI Connect.
- Three hours of downtime was avoided for 120 workers, averaging a burdened labor cost of \$50 per hour, per laborer, **for a total downtime cost avoided of \$18,000.**



The tracking roller failure led to the belt veering off the tracking unit, resulting in an elevated temperature



Failed Bearing on Tracking roller