Are You the Weakest Link?

Robert Gilliam (Bobby Lee)
DATE SITE OPENED: Began Production in 1972

FOOTPRINT: 1.4 M SQ FT UNDER ROOF

EMPLOYEES: ~3000

DISTRIBUTION: WORLDWIDE

KEY PRODUCTS: 150ML TO 6L BAGS

PRODUCTION: 1.3 MILLION UNITS DAILY
Agenda

• Value of attending production meetings.

• How to leverage continuous improvement teams to see our value.

• Root Cause Analysis Programs.

• Predictive Maintenance Program.

• Celebrating the wins.
Attending Production Meetings

Purpose

• Allows you to paint a better picture of the issues operations are facing.

• Hand-select Projects.

• Report on ongoing projects.
Production Meeting Projects

Air Jet

Cushion Cylinder Installation

Stainless Steel Hose Clamp
Continuous Improvement Teams

Cross-Functional Teams

• Build Relationships.
• Learn other people’s skill sets

Data-Driven Results

• Provide the data that will drive the results.
• Mean Time Between Failure (MTBF)
• Mean Time To Repair (MTTR)
• Overall Equipment Effectiveness (OEE)
Results

Fault Improvements

- June: Shot Pin A = 49, Accumulator = 79.5, Collision Detect = 126
- August: Shot Pin A = 61, Accumulator = 86.2, Collision Detect = 65
- October: Shot Pin A = 19, Accumulator = 17.6,Collision Detect = 7
Root Cause Analysis Program

Cross-Functional Team
- Subject Matter Experts (SME)
- Department Collaboration
- Paint a better picture of what is going on.

Ownership
- Assign ownership.
- Everyone has a voice.

Educational Opportunity
- Predictive Technologies
- Operator Care Task
- Process Evaluations
Motor failure due to improper lubrication.

Ball of copper from the winding failure.

Bearing inner race showing significant signs of pitting from contamination.

Air Handling Unit RCA

- Drive motor for an air handling unit.
- Resulted in 14 hours of downtime and a production loss of 380,000 units.
Cooling Tower RCA Timeline

- 6/21/2022 @ 5:02:12PM Pump #3 Faulted due to B phase being overloaded. (Heaters tripped due to overheating.)
- 6/21/2022 @ 5:02:40PM Compressors exceeded temperature settings causing compressors to go offline.
- 6/21/2022 Pump #2 was running until 5:07 PM
- 6/23/2022 @ 3:45:00PM Found Broken Coupling on Pump #2.
- 6/23/2022 @ 3:45:00PM Found a broken pressure gauge on Pump #2 making you think that pump is running.
- 6/23/2022 Data shows that the amperage dropped from 43Amps down to 21Amps indicating a coupling failure on 5/18/2022 @ 2:53AM
Monitron Success Stories - Cooling Tower

- Cooling Tower 8 provides chilled water to several production areas to maintain room temperature.
- **High ISO Alarm** – PdM Tech identified gearbox in a near critical failure state.
- Estimated Savings of 12 hours of lost production.
- We were able to plan and schedule the repair at the time most convenient to our production schedule and contractors.
Monitron Success Stories – Wood Boiler Feed Pump

- Supplies water for Steam generation to Wood Boiler.

- **Machine Learning (Vibration)** – Wood Boiler Feed Pump

- Estimated Savings 4 hours of production.

- Resolution: Replaced Coupling and realignment
Monitron Success Stories – Vacuum Blower

• Provides vacuum to Bag Picking Equipment.

• Machine Learning (Temperature)

• Estimated Savings: 8 hours of production loss.

• Resolution: Replacement of Bearing
Celebrate The Wins!!!!

**Top 5 Projects - Cell 1**

<table>
<thead>
<tr>
<th>Project</th>
<th>Assigned To</th>
<th>Due Date</th>
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</thead>
<tbody>
<tr>
<td>Generate Preventive Maintenance Plan for Trucks</td>
<td>Brielle Baucom</td>
<td>04/05/23</td>
</tr>
<tr>
<td>AGV Project</td>
<td>Tyler Koski</td>
<td>04/15/23</td>
</tr>
<tr>
<td>Packline 10 TPS RCA of Failed Conveyor Motor</td>
<td>Tyler Koski</td>
<td>04/28/23</td>
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<tr>
<td>FoxJet Ink Printer Investigation</td>
<td>Tyler Koski</td>
<td>05/31/23</td>
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<tr>
<td>LPF Index Chain Replacement</td>
<td>Nicole Burns</td>
<td>08/01/23</td>
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**Top 5 Projects - Cell 2**

<table>
<thead>
<tr>
<th>Project</th>
<th>Assigned To</th>
<th>Due Date</th>
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<tbody>
<tr>
<td>Electric Hoist for Kiefel North, Kiefel South, and Subassembly</td>
<td>Doug Mathison</td>
<td>04/01/23</td>
</tr>
<tr>
<td>Kiefel 74 Wicks Replacement Setup</td>
<td>Matthew Blizzard</td>
<td>05/25/23</td>
</tr>
<tr>
<td>Kiefel 98 Head Lifting Alignment</td>
<td>Matthew Blizzard</td>
<td>06/15/23</td>
</tr>
<tr>
<td>Upgrade the banders on HSISM 20</td>
<td>Doug Mathison</td>
<td>08/25/23</td>
</tr>
<tr>
<td>Extruder #8 Controls Upgrade</td>
<td>Doug Mathison</td>
<td>02/23/24</td>
</tr>
</tbody>
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