RotaLube **Boosts** Pin Oven **Uptime** and **Efficiency**

Case Study

Challenge

Our customer, a manufacturer of food-safe cans and metal containers, faced chain lubrication issues with their pin oven. They were using an outdated and ineffective method for applying lubrication, which caused several problems. The lubricant would contaminate the chain and pins, leading to wear, buildup, and dust accumulation. As this buildup baked in the oven, it eventually prevented oil from reaching the pins and chains altogether. This contamination caused thousands of cans and products to be rejected during inspections, resulting in significant losses.

In addition to contamination, improper lubrication contributed to chain wear through elongation and increased friction. The inefficiency of the lubrication system also led to higher power consumption, as the machines had to work harder to operate.

These issues not only impacted production quality but also raised operational costs, making it critical to find a more effective solution to ensure consistent performance and prevent further contamination and damage.

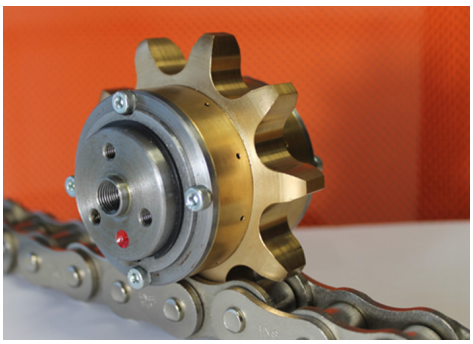
- The outdated lubrication system caused contamination, buildup and dust attraction which prevented proper lubrication and led to chain wear, elongation and friction.
- The lubrication problems led to contamination of cans, which resulted in product rejection and increased power consumption.

Solution

A High-Temperature RotaLube System was chosen to address the lubrication issues, as it can withstand temperatures up to 210°C.

Constructed from steel and fitted with a high-temperature Viton seal, the system precisely applies the right amount of lubrication to the chains in the correct locations, reducing contamination and buildup. A precise applicator was added to minimise surrounding contamination and prevent lubricant buildup on the chain.

The system is designed to use minimal lubricant while ensuring effective lubrication regardless of the chain's speed.



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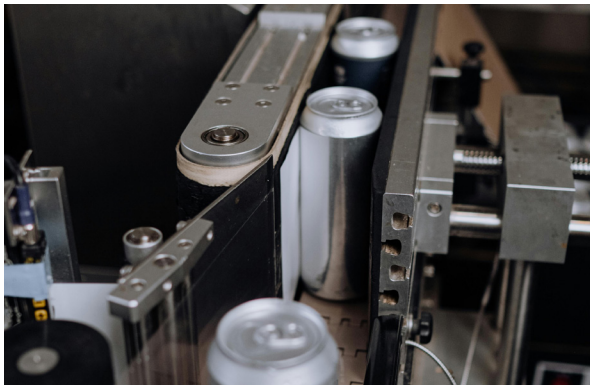

Photos: Can Production.

Results

The customer saw significant improvements after the RotaLube system was installed. Uptime increased, as the system efficiently lubricated the chains, reducing maintenance needs and allowing continuous operation.

The life of the chains improved, with less wear and elongation, leading to fewer replacements. Productivity also rose, as the machines ran smoother and more reliably.

Additionally, there was a notable decrease in downtime, lubrication usage, contamination, and power costs, all contributing to more efficient and cost-effective operations.

- Increase in uptime and productivity.
- Extended chain life.
- Reduced costs from a decrease in downtime, lubrication usage and power costs.

Pin Oven

A pin oven is an essential piece of equipment in manufacturing metal cans, these ovens have rotating pins that hold and spin the cans as they move through a heated chamber, this ensures that the coating is evenly cured.

Pin ovens are equipped with precise temperature controls and air circulation systems to maintain efficient heat distribution.

Due to the high temperatures and continuous operation, it is vital to have efficient lubrication to minimise wear, and friction to prevent any unscheduled downtime.

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