Pulp Mill Manufacturer Reduces Bottlenecks with RotaLube

Case Study

Challenge

Our customer, a manufacturer in a pulp mill, was using a traditional gravity-fed chain lubrication system that proved ineffective in the demanding process of producing paper rolls. This old system struggled with inconsistent lubrication, excessive oil consumption, and wastage. It also required frequent maintenance and often led to contamination of both the product and the surrounding environment.

These inefficiencies created additional stress on the chains, which resulted in their short lifespan of just 1 to 1.5 years.

Consequently, frequent chain replacements were necessary, leading to costly downtime. As this machine played a crucial role in the manufacturing and transportation process, it needed to run 24/7 to maintain smooth operations.

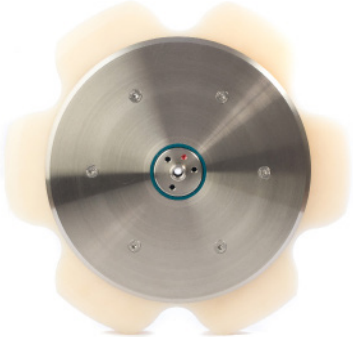
Each time the machine experienced downtime, a bottleneck in production occurred, significantly affecting overall efficiency and output.

- The customer's traditional gravity-fed lubrication system was inefficient, this led to inconsistent lubrication, excessive oil use, contamination and frequent maintenance.
- The inefficient lubrication system caused increased chain stress and a shorter chain lifespan of 1-1.5 years, resulting in frequent replacements, downtime and production bottlenecks in their 24/7 operation.

Solution

We identified that the ideal solution for the chain lubrication issues was installing a Heavy-Duty RotaLube System, designed for large pitch chains in high-load, high-wear environments like the lift in the pulp mill.

Constructed with aluminium sprockets and Viton seals, it ensures efficient lubrication while withstanding extreme conditions. The system was programmed to provide consistent, accurate lubrication to the chain, reducing maintenance and downtime costs, and ensuring continuous operation 24/7, eliminating bottlenecks caused by downtime.



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Photos: Paper Roll Manufacturing Processes.

Results

The customer saw immediate results after installing the Heavy-Duty RotaLube system. Maintenance and operational costs decreased significantly due to the elimination of wasted lubricant and reduced downtime for repairs.

The life expectancy of the chains more than tripled, increasing from 1-1.5 years to several years, which led to fewer chain replacements.

With longer-lasting chains and less downtime, the machinery became more efficient, allowing the system to run 24/7 without interruptions, ultimately increasing overall productivity.

Maintenance and operational costs significantly decreased use to reduced lubricant waste and minimised downtime.

Chain life expectancy tripled, reducing the frequency of replacements and associated costs.

Productivity increased as machinery operated more efficiently, now running 24/7 without any interruptions.

Pulp Mill Lift System

The lift system in a pulp mill is a critical component in the production process, it is usually used to transport heavy materials or products in the mill such as raw pulp or processed sheets.

These lifts need to run continuously without interruption, to keep the production flow going. These chains are heavy-duty to deal with high loads, constant wear and challenges in the environment like dust, heat and moisture.

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