Donaldson HY-PRO™

Years of Water Contamination Solved:

How the V1 Vacuum Dehydrator Helped Protect $15M in Critical Equipment

The Problem

Through Donaldson Hy-Pro's consultative approach, a major paper manufacturer was able to solve a water contamination problem that had been ongoing for years.

The mill's boiler feed pump lubrication system contained excessive water contamination, with water levels reaching 0.141% (1410 ppm). This water contamination was depleting the oil's additive package, contributing to poor oil condition and shortening the L10 life of critical bearings, putting the mill at risk for catastrophic bearing failure.

The mill had been replacing water-absorbing filter elements as frequently as every few days for several years to manage the issue. However, the filters only removed free water, allowing dissolved water to remain in the system and continue damaging the oil. This constant maintenance approach piled on the costs of the issue.

- $30,000 in lost production per downtime event
- $1,800 in labor per cycle
- $1,300 in oil replacement
- $7,566 per year in consumables
- $15,000,000+ risk of complete bearing failure
- Total potential impact: $15,040,666

The paper mill team raised the issue during a consultative conversation with Donaldson Hy-Pro.



The Solution

Donaldson Hy-Pro consultants listened closely and visited the site to assess the system. Our team determined that the existing water-absorbing filters were only removing free water while dissolved water remained in the system. We also identified space constraints that limited conventional dehydration options.

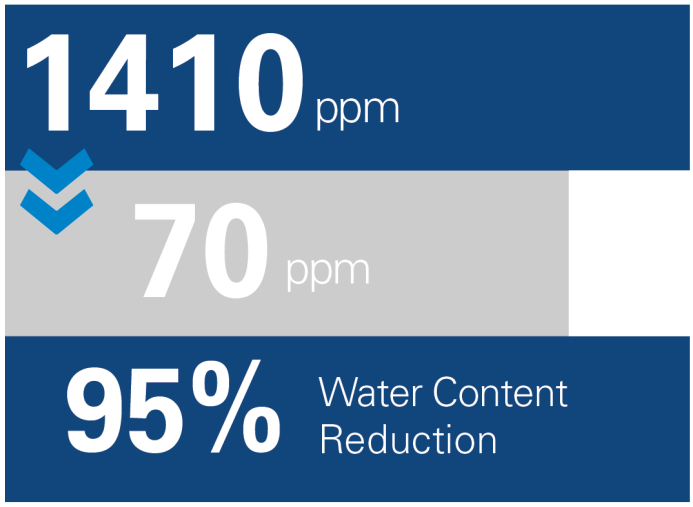
To solve both challenges, we recommended the Donaldson Hy-Pro V1 Vacuum Dehydrator, a compact system designed to remove free, emulsified, and dissolved water from lubricating oils. The unit also incorporated a kidney loop filtration circuit to continuously clean the oil and help improve ISO cleanliness levels.

The compact design fit the available space and allowed the team to condition the oil continuously without disrupting operations.

The Results

Within a few months of installation, the mill achieved measurable improvements:

- Reduced water content from 0.141% (1410 ppm) to 0.007% (70 ppm)
- Improved ISO cleanliness to 19/17/15
- Eliminated frequent filter changes, saving $7,566 annually in consumables
- Helped extend oil life by preserving additive integrity
- Helped protect critical assets, reducing the risk of a $15 million failure



HOW THE V1 HELPED REDUCE $15M RISK OF PREMATURE BEARING FAILURE

The Conclusion

By taking a consultative approach, Donaldson Hy-Pro helped the mill break a costly cycle of reactive maintenance. The V1 Vacuum Dehydrator delivered a targeted, space-efficient solution that restored oil health, reduced long-term risk, and helped protect equipment that the plant couldn't afford to lose.

Want to find out more? Get in touch.

hyprofiltration.com
info@hyprofiltration.com
+1 317 849 3535

© 2026 Donaldson Hy-Pro Corporation. All rights reserved

Donaldson HY-PRO™

F118252 - 100126 - TF