NALCO Water
An Ecolab Company

Conventional Machine Sees Improved Speed, Reduced Downtime and Optimized Chemical Program with Tulip™ 64850

CASE STUDY

BACKGROUND

Tissue and towel makers require flexible Yankee coating programs across all machine platforms and all grade environments. Nalco Water provides tissue and towel makers with a robust portfolio of adhesive, modifier and release products, combined with unrivaled expertise, service and digital technology (PaperIQ™ with 3D TRASAR™ for Yankee Operations), to improve productivity, product quality and Yankee protection.

In an effort to produce a soft, high-adhesion and durable adhesive chemistry, Nalco Water developed the Tulip 64850 creping technology. The Tulip program consists of a Modified Vinyl Polymer (MVP) resin that provides excellent adhesion at significantly lower addition rates compared to PAE resins.

A conventional machine producing 225 TPD in North America was experiencing issues with sheet stability, resulting in excessive breaks and felt contamination. Nalco Water proposed trialing Tulip 64850 to address these challenges.

SOLUTION

Nalco Water's Tulip 64850 is significantly softer than even fully cross-linked PAE resins, resulting in creping blade tip penetration and the elimination of the troublesome outside sheet edge build-up commonly witnessed on tissue machines. Tulip 64850 generates a malleable film with enough durability to protect the Yankee during the creping process. Nalco Water's field and technical expertise, combined with our robust portfolio, allows us to optimize programs for individual needs.

Compared to common PAE programs, Nalco Water's Tulip 64850 provides:

ENHANCED softness while maintaining other desired sheet characteristics

STRONG PERFORMANCE with low add-on rates

ENVIRONMENTALLY FRIENDLY technology with no VOC or chloro-organic by-products

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ANNUAL VALUE

PRODUCTIVITY

Increased Machine Speed
1%

Reduced Downtime
0.7 hrs/day

Reduced Add-ons
45%

TOTAL VALUE DELIVERED

>$800,000

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RESULTS

Nalco Water trialed and implemented Tulip 64850 and created the following value for the mill:

- Increased machine speed by 1% and reduced downtime by 0.7 hrs/day, generating approximately $200K in savings
- Reduced add-on by 45%, generating approximately $200K in savings
- Improved coating film and uniformity
- Improved sheet transfer and adhesion development
- Reduced edge build-up and increased Yankee protection

CONCLUSION

Tulip 64850 provides significant benefits compared to common PAE programs. This is only one product in the robust portfolio of Yankee adhesive, modifier and release products offered by Nalco Water.

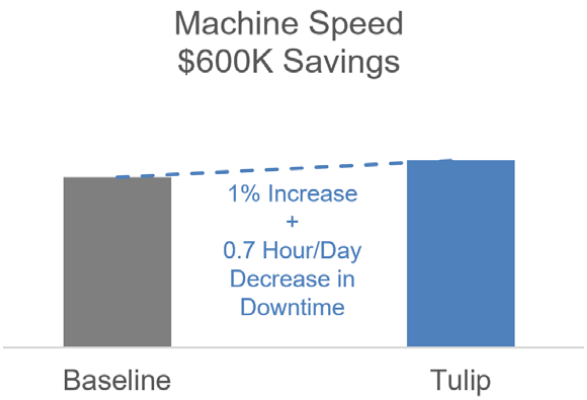

FIGURE 1: The machine speed trends before and after the Nalco Water treatment program

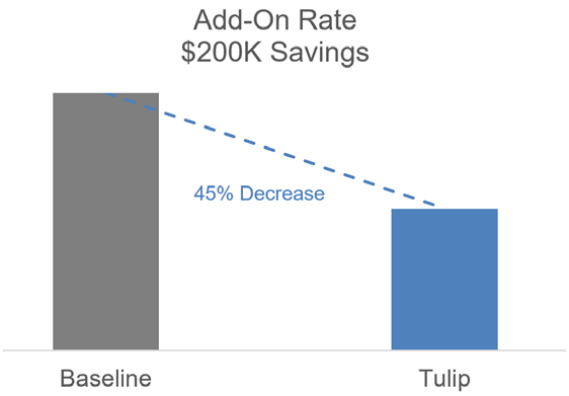

FIGURE 2: Savings from the add-on after the Nalco Water treatment program

The results in this case study are specific to this individual customer. Results will vary for other customers based on factors and circumstances in their operations. Because of factors outside of Ecolab's control, such as water conditions, operational procedures and any other factors, results to be obtained including but not limited to water and cost savings cannot be predicted or guaranteed by Ecolab.

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