

# CASE STUDY

# ENESSCO

- ◆ STICKIES CONTROL, POLYMER, DEINKING CHEMICALS REDUCED OVER 50%
- ◆ HIGHER BRIGHTNESS-LOWER DIRT/STICKIES COUNTS

Operation:	<u>Wisconsin, Integrated Deink/Tissue Facility</u>		
Machine	Multiple Lightweight Specialty Tissue Machines		
Furnish	Originally:	20% Sulfite Book	80% Pre-Consumer SBS
		With ENESSCO 100% Post-Consumer - Mixed Office Furnish, Ledger, Book	

## Problem:

Mill was experiencing excessive furnish costs due to price increases associated with Pre-consumer furnish. Mill evaluated using between 30%-50% Post-consumer Office Waste, but had major stickies deposition on the forming and press felts. Machine operation efficiencies were poor.

Traditional alkaline deinking also resulted in excessive DAF polymer costs and lower brightness on sulfite furnishes. Mill was required to acid neutralize mill effluent prior to POTW.

Sheet quality was poor while using only 30% substitution of MOW Furnish. High stickies related sheet holes required significant production to be downgraded. Machine downtime increased as post-consumer MOW was increased.

Elevated dirt counts and poor brightness resulted in excessive bleaching, deinking, and polymer costs.

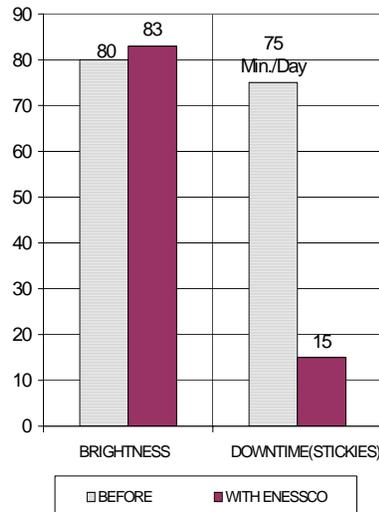
## Solution:

Survey of the process revealed the high pH, coupled with deinking surfactants, was over dispersing ink and stickies contaminants.

Clarification, Screening and Cleaning equipment was unable to remove these micro contaminants. Subsequently, process white water held high concentrations of ink and stickies and caused the facility to use aggressive bleaching steps to attain their 82 point brightness specifications.

100% concentrated ENESSCO was fed to the pulper at 1.0 lb./ton under neutral pH via repulpable bags. Traditional Deinking Chemicals were eliminated.

### ENESSCO improves quality



## Results:

ENESSCO Deinking benefits included 3 points higher brightness (prior to bleaching), while reducing "stickies/ink-dirt counts" by over 30%. Caustic and Washing deinking chemistries were eliminated. Flotation aid and Bleaching (meet 82 brightness) was reduced by over 30%. The ENESSCO offers even higher value when producing their 86 brightness grades.

Stickies modification resulted in an increase of contaminants being removed by fine screens and cleaners. Pulp stickies counts were reduced by 50%. This resulted in the machine eliminating the polymer "stickies fixative stock treatment" and significantly reducing fabric treatment cost.

The ENESSCO technology allowed the mill to maintain superior performance when the furnish was changed to 80% Post-Consumer content; substantial cost savings were realized.

The mill effectively reduced most chemistry costs. Polymer was reduced by 30%. Defoamer was cut in half. Displector, Caustic, Chelant, and Acid were eliminated.