

# CASE STUDY

# ENESSCO

- ◆ 3.25% INCREASE IN QUALITY PRODUCTION
- ◆ 12% REDUCTION IN FIBER LOSSES
- ◆ HIGHER BRIGHTNESS-REDUCED DIRT/STICKIES COUNTS

Operation: Midwest Deink Pulping Facility (100 T/D)

Process Washing/Flotation System (pH 8.5-9.5 - Displector Chemistry)

Furnish 100% Post-Consumer; 80% MOW, 20% Ledger

## Problem:

Mill was trying to reduce costs due to very difficult Deink Market Pulp price conditions. Number one priority was to maintain or improve present pulp quality. Cost reduction areas targeted included reducing bleaching costs and improving yield.

The cost of fiber losses (loss production & disposal) was the biggest expense to the mill. Given an 80% MOW furnish, they were required to operate with high fiber losses to maintain quality. Calculated yield loss was worth \$420 per ton in incremental profit. Mill direction was to pursue equipment and chemistry trials to improve yield.

Bleaching costs was another area of emphasis. Plans were made to investigate all options to reduce this major expense.

## Solution:

Evaluation of the process revealed that the Displector deinking surfactants and other process conditions were over dispersing ink and stickies contaminants. Deink Loop

Clarification, Screening and Cleaner equipment was unable to remove these fine materials. Subsequently, white water process loops held high levels of ink and micro stickies.

Although this Deinking Facility was meeting the brightness, dirt, and stickies specifications required by their customers, it was evident it was being accomplished via a higher than necessary reject rate from the deinking/stock prep process. The low "pre-bleaching" brightness was a major indication excessive bleach was being used to overcome ink carryover.

ENESSCO was fed to the pulper at 1.2 lbs./ton; displector chemistry was reduced 50%.

## Results:

A significant increase of contaminants removed by fine screens and cleaners was documented. Pulp stickies counts were reduced by 50%, dirt count lowered 15%, while yield was increased by 3-4 tons/day.

ENESSCO Deinking benefits included 2-3 points higher brightness (prior to bleaching). This resulted in a significant reduction of bleach to achieve the mills required final brightness specifications. ENESSCO resulted in a significant 3 to 1 R.O.I.

	<u>Savings</u>
Reduced Bleach	\$200/D
Increased Production	\$1680/D
Reduced Waste Disposal	\$140/D
Reduction of Displector	\$150/D
Lower Stickies Counts	-
Higher Brightness-	\$2,170/D

ENESSCO's Cost \$510/Day

**Net Savings = \$1,660 /Day**

