Bercen, Inc.

Where Innovative Solutions Begin!

BERCHEM® 4113*
Replaces Emtal 50 CS to save over $3 Million/Year

CASE STUDY

MILL OVERVIEW:

Mill: Fine Paper Mill
Grades: Offset
Furnish: Bleached Hardwood/Softwood
Machine: Fourdrinier
Production: 1000 tpd
Speed: 2000 fpm

SYSTEM OVERVIEW:

Blade Coater:
Latex
Clay
CaCO3
PPG
Dispersant
Lubricant

Solids: 61%
Hercules: 74 cps
pH: 9.4
Brookfield 6100 cps

MILL OBJECTIVE AND TESTING REQUIREMENTS:

The mill was having an issue with coating picking off the sheet and sticking to the fly rolls on the super calendar. This would cause imperfections and indentations on the sheet surface. The mill was using Emtal 50 CS lubricant at 0.5 parts. The objective was to change to a more effective lubricant in an attempt to eliminate the picking or "spots". Paper rejection and visual inspection will be the main parameters monitored that would indicate improvement.

PRE-TRIAL OBJECTIVES:

The mill had previously used **BERCHEM® 4113**, a diglyceride lubricant, and switched to Emtal 50 CS in an effort to save money. Initially the mill did save money on the lubricant cost, but was rejecting over 560 tons per month due to picking or "spots" on the super calenders. The objective was to switch back to the **BERCHEM® 4113** at 1 part to eliminate or improve the picking or "spots".

APPLICATION:

Based on the lab studies, a dosage rate of 1.0 parts of **BERCHEM® 4113** to be added during the batch make down was recommended. If a technical success is achieved at 1.0 parts, Bercen will initiate a program of optimization down to a normal rate of 0.5 to 0.7 parts.

RESULTS:

During the first hours of the trial, positive effects were observed. At a dosage rate of 1.0 part, the rejection rate went from 560 tons in the pretrial month to 150 tons the first month. This is over a 70% reduction. Most of the scratching was also eliminated due to the superior ability of **BERCHEM® 4113** to hold water. This change to a more effective lubricant saved the company over $400,000.00 per month in off quality production.

* U.S. Patent Numbers 5,858,933 and 4,766,015