

Case History

KemForm P Retention & Drainage

Market Segment

Recycled Linerboard mill in Southeast US

Mill Situation

Wet End

Voith Brazil Gap Former running at 2500 fpm, 71,000 tons per year

Flooded Nip Size Press

Basis weights: 26lb to 42lb Liner and Medium

Furnish: >20% OCC, <80% mixed waste grade dependent

Conductivity: 3400 μ S/cm

Chemicals

Retention and drainage program: cationic PAM (0.25 to 0.75 lb/ton) discharge side of pressure screen

Cationic starch prior to fan pump

Alkynyl succinic anhydride (ASA) sizing system

Customers Objective

Replace incumbent program to improve drainage with the recent increase of mow usage.

Proposed Solution

Kemira Chemicals representatives completed a process survey of the paper machine wet end to identify the optimum feed locations and retention-drainage system for improving product and machine performance. A The KemForm P retention system was recommended, which included Fennopol K3902 CPAM and Fennosil ES-325 micropolymer, both post screen.

Customer Benefits

- Drainage increased 200-300% at the increased MOW level!
- Machine speeds were increased 150 to 250 fpm on light weight grades
- Tray solids reduced 30 to 50%
- Increased MOW 5 to 10% resulted in US\$1.25 to US\$3.50/ton fibre savings
- The option to reduce steam by 10% was chosen over speed increases and US\$2.50 to US\$3.00/ton of savings was realized
- Increased MOW content did not impact formation and thus ring crush, mullen, and tensile specifications were maintained

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