AFT Case Study

SC3

• Improved Debris Removal

AFT MacroFlow™ screen cylinders represent the state-of-the-art in screening technology. Its advanced wedgewire design features both the increased open area afforded by a continuous slot - and superior strength relative to a resistance-welded wedgewire construction. AFT MacroFlow™ screen cylinders are also distinguished by the industry's largest selection of wire sizes, which enables each application to be optimized.

In this case study, AFT MacroFlow™ cylinders were supplied to a deinked pulp application which was suffering from low stickies (debris) removal efficiency. AFT was able to select a wire size specifically for this application. The combination of reduced passing velocity and optimized turbulence levels led to a substantial increase in 35% improvement in debris removal - without any change in slot width or loss of capacity.

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The Background

The subject mill is located in North America, and is an integrated pulp and paper operation producing 400,000 MTPY of newsprint. The mill has a de-inking and a TMP plant, with approximately 30 to 40% of its furnish coming from the deink operations.

The deink plant features a 2 stage, cascade feed back system using inflow screens, and operating with a feed consistency of 1%. The primary stage screens have traditionally used 0.006” (0.15 mm) wide slots.

Debris removal efficiency has been measured at approximately 60% in a number of internal studies. Any improvement in debris removal would represent a significant opportunity to increase customer satisfaction on the part of the newspaper publishers.

The Solution

AFT reviewed the operations of the mill, and supplied an AFT MacroFlow™ cylinder with the same (0.15 mm) slot size - but with an optimal wire shape. This, combined with the gentler contour, increased debris removal efficiency from 60% to 85%. This was done without compromising system capacity or runnability.

The Benefits

Installation of the AFT MacroFlow™ cylinders led to a 35% increase in debris removal efficiency - without any compromise of system capacity or runnability.

The benefits of reduced debris levels to a deink operation and, in turn, the customers of the newsprint mill are:

- Enhanced product appearance
- Reduced pressroom breaks
- Overall increased customer satisfaction