

# AFT Case Study

SC4

- **Improved Cleanliness**
- **MacroFlow™ Headbox Screens**

AFT MacroFlow™ screen cylinders represent the state-of-the-art in screening technology. The advanced wedgewire design provides 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. The combination of its non-welded construction and "headbox quality" finish eliminates the formation of strings or deposits, which would be harmful to headbox applications.

In this case study, an AFT MacroFlow™ cylinder was supplied to a mill making kraft papers for their headbox screen. The mill was strongly motivated to reduce the number of pinholes in its product and the associated tonnage of "off-quality" paper. The AFT MacroFlow™ cylinders had substantially smaller apertures than what the mill had been operating previously - and yet the cylinders ran without any problem, achieving full capacity. The smaller apertures, and associated high debris removal efficiency reduced the mill's off-quality production by 90%.



## The Background

The subject mill is located in Canada, and is an integrated pulp and paper operation producing a total of 90,000 MTPY of kraft papers. The furnish varies from 100% virgin softwood kraft to 100% recycled pulp.

The mill has a Bird M24 Centriscreen operating as its headbox screen. It had traditionally been operated with a drilled cylinder featuring 1.6 mm (0.062") diameter holes.

The holes that had been operating in the headbox screen could only be expected to remove the largest of contaminants, such as tramp metal. The screen's main role was thus to protect the papermachine rather than to remove residual contaminants from the furnish. Small contaminants were causing holes in the paper sheet leading to over 50 tonnes of rejected production each month.

## The Solution

AFT reviewed the operations of the mill, and supplied an AFT MacroFlow™ cylinder with 0.35 mm slots. A headbox finish ensured string-free operation. The capacity and runnability of the screen was excellent, and the debris level in the accept pulp was significantly reduced.

## The Benefits

Installation of an AFT MacroFlow™ headbox cylinder led to a 90% reduction in off-quality production. The mill also benefited from reduced fiber fractionation, which led to more long fiber being passed to the product and enhanced paper properties.

Two months after this successful start-up, the mill ordered a MacroFlow™ cylinder for the headbox of their second paper machine. This second cylinder has been started-up with equal success.

