

## **Smart Elbow™ Triumphs Over Abrasion in Pulp and Paper Industry**

**A**t Northwood Pulp and Timber Ltd. of Prince George, British Columbia, Maintenance Supervisor Mario Rezendes had to deal with a problem common to the pulp and paper industry. Wood particles, in this case hog fuel (bark and sawdust), can become highly abrasive when pneumatically conveyed.

At the Northwood facility, wear-back sweep elbows in the 12" diameter hog fuel pneumatic conveying line were wearing out every three months and creating repair and clean-up work and expense on a regular basis. Not satisfied with the performance of the hog fuel conveying system, Rezendes tried a new elbow that he had heard about, the Smart Elbow™ by HammerTek, at one location in the three elbow system.

Elbow wear through is a function of conveyed particle impact and friction with sweep elbow walls. The Smart Elbow™ changes conveying direction through deflection, not by impact with elbow walls. At system start up, a loose, slowly rotating ball of conveyed material forms in the vortice chamber at the back of the elbow, cushioning impact and deflecting flow through the elbow.

The end result is smoother, more even flow, and the elimination of elbow wear, which is exactly what happened at Northwood.



**The first Smart Elbow™ installed at Northwood in the hog fuel conveying system (above) worked so well that the two sweep elbows also shown above were eventually replaced with two more 12" cast iron HammerTek Smart Elbows™.**

The first Smart Elbow™ that Northwood installed lasted for **four years**, as opposed to the several months that wear back sweeps were lasting. Based on this performance, the other two elbows in the hog fuel conveying system were subsequently also changed to Smart Elbows™. Current plans at the Prince George plant call for the installation of three 10" diameter Smart Elbows™ in the chip handling system.

The patented Smart Elbow™ does a better job of conveying than sweep elbows. It saves space, cost, and time due to superior design and performance.

*The Smart Elbow™ is available in a variety of materials and a wide range of pipe and tube sizes. For more information, contact HammerTek Corporation, P.O. Box 416, Landisville, PA 17538, 1-800-505-9665, 717/898-7665, Fax 717/898-9279.*



# CURRENT SMART ELBOW™ USERS WITHIN THE NORTH AMERICAN FOREST INDUSTRIES

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## CANADA

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British Columbia Forest Products, B.C.	Fly Ash
Consolidated Bathurst, Que.	Hog Fuel
International Paper, Que.	Dry Wood Chips
MacMillan Bloedel, B.C.	Coke, Lime
Crestbrook Forest Ind., B.C.	Knots, Lime
Fletcher Challenge, B.C.	Lime, Wood Chips
Findlay Forest, B.C.	Hog Fuel
Fletcher Challenge, B.C.	Lime Dust, Fly Ash
Northwood Pulp & Timber, B.C.	Lime, Hog Fuel
Irving Pulp & Paper, N.S.	Wood Chips, Lime
Lake Utopia Paper, N.B.	Wood Chips
Atlantic Waferboard, N.B.	Wood Chips
Bowater Mersey Paper Co. Ltd., N.S.	Hog Fuel
Stora Forest Products, N.S.	Wood Chips
Cornerbrook Pulp & Paper (Kruger), N.S.	Wood Chips
E. B. Eddy Forest Products, Ont.	Fly Ash
C. T. P. Gatneau, Que.	Wood Chips
Diashowa, Que.	Wood Chips
Fraser Inc., N.B.	Steam Condensate, Lime, Hog Fuel
Skeena Cellulose, B.C.	Steam Condensate, Lime
Western Pulp Ltd., B.C.	Fly Ash

## USA

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Bear Island Paper, VA.	Fly Ash
Crown Zellerbach, WA.	Wood Chips
Moad Paper, MI.	Lime
Weyerhaeuser, WA./NC./OR.	Lime Dust, Slurry/Hog Fuel
Montana De Fibre, NM.	Wood Fibers
Scott Paper, WA.	Wood Chips

*Inclusion in this list does not in any way constitute an endorsement of the Smart Elbow™  
or any other HammerTek products.*