



TECHNICAL ARTICLE SERIES

HT-1016

Deflection Elbow Excels for Pulp & Paper



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Smart Elbow® Deflection Elbow Excels for Pulp & Paper

There were several reasons that a British Columbia, Canada, sawmill chose the Smart Elbow deflection elbow for installation in a new pneumatic conveying system. Due to the potentially abrasive nature of wood chips and dust when conveyed pneumatically, plant engineering designed the new system to perform without necessitating the repair and replacement chores that would have been created by the use of conventional sweep elbows.

The new system handles the collection and routing of cedar dust and shavings from the sawmill's two planer mills. The original system was a total low pressure system and simply couldn't handle the demands placed upon it. Late in 1990 the new system, consisting of a low pressure pick up line and high pressure transmission lines, was installed.

In the new system, low pressure fans draw materials from the planer mills to filter baghouses where the material is then inserted into high pressure conveying lines by means of rotary air lock feeders.

British Columbia Sawmill

Once material enters the high pressure lines, it is routed either to a new clean burning thermal plant which is used to provide heat for lumber drying kilns, or to a scow on which it is transported along with hog fuel to pulp mills.

The Smart Elbow deflection elbow by HammerTek allows change of conveying direction without the wear and plugging common to conventional elbow designs.

Four Smart Elbow models of 10 in. diameter were chosen for several locations in the high pressure system. The engineer on this project had successfully used the Smart Elbow deflection elbow five years ago at another site. Based on previous experience, the Smart Elbow unit is expected to reduce system maintenance over the long term, and will result in a more compact system, due to its smaller physical size. Ease of mounting the Smart Elbow products was another reason the HammerTek elbow was chosen for this particular application.

The Smart Elbow deflection elbow is available in a variety of materials and a wide range of pipe and tube sizes.



British Columbia Sawmill



10 in. Vortex Vortex Ell elbows in new high pressure system.