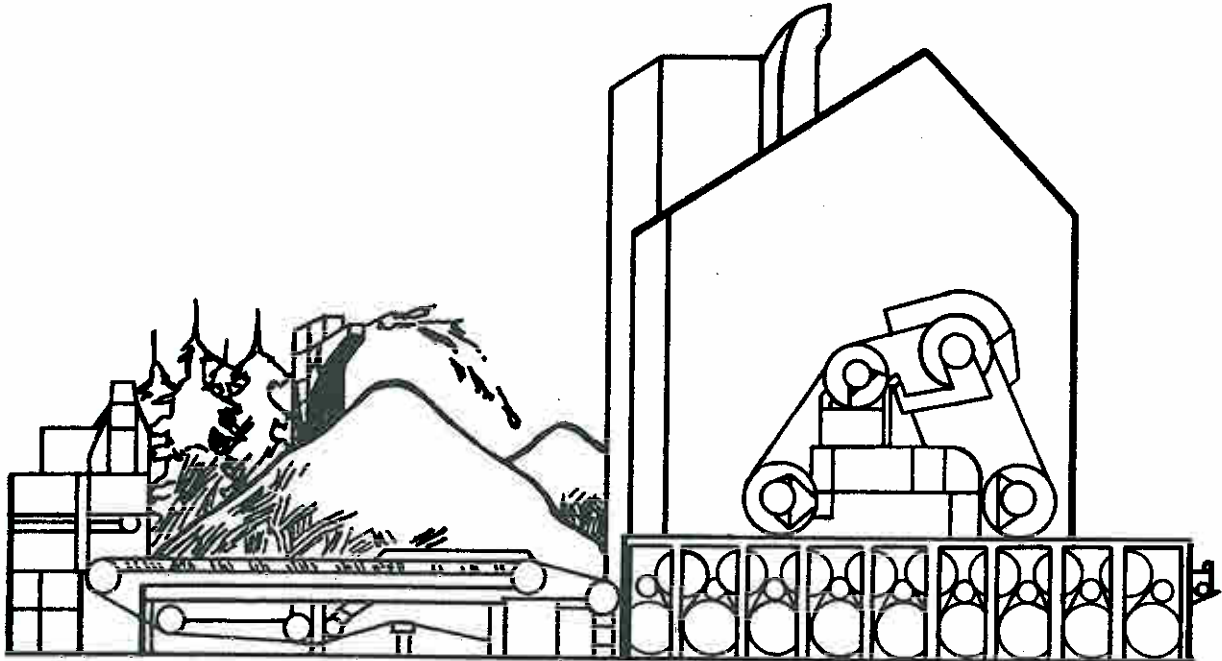


PAPER MILLS



PINCH VALVES ON PULP & PAPER

By Larry Schneider, P.E.

For more than 25 years our experience has proved that Red Valve Pinch Valves out wear all conventional valves in Pulp and Paper Mills and thus reduce maintenance and replacement costs.

For instance, a 6" Type "A" Red Valve installed in a pulper water system at Neenah Paper Company, Neenah, Wisconsin, cycled 300 times a week from 1962 to 1981 when the sleeve was replaced. More than 1/4 million cycles were put on the sleeve.

The patented design of Red Valves prevents clogging, withstands heat, resists abrasion from lime slurry and impurities (binding thread, wire from recycled paper), and provides superior control on head boxes.

Other applications where Red Valves proved to be the answer to plant problems include white water bypass systems, paper coating applications, talc process, white water mix tanks, and lime systems. Typical case histories include:

WHITE WATER BYPASS

- PLANT:** Appleton Paper Company in Appleton, Wisconsin
- PROBLEM:** White water bypass valves clog easily causing dewatering. A bypass system is used to maintain pressure since an excess will flood the machine.
- SOLUTION:** A Type "A" easily solves the problem when used as a pressure relief valve because a fixed air pressure is applied to the jacket and excess pressure in the pipeline automatically forces the sleeve open to relieve. The resulting smooth venturi does not clog. Other mills have tried this application, and think very highly of it.

HEAD BOX CONTROL FOR RECYCLED PAPER

- PLANT:** Menasha Paperboard in Neenah, Wisconsin
- PROBLEM:** Although, recycled paper must be thoroughly repulped and cleaned, impurities, such as staples, can still pass through the system. This caused problems with the bearings and seat on the Fisher "V" Balls which controlled the recycled solution to the paper machine.
- SOLUTION:** Menasha used Type "A" valves. Staples will not damage the seat and there are not bearings for stapled to gall and destroy.
- The Type "A" is quick opening, and the surge caused heavy splashing. Some baffles welded on the head box solved the splashing problem.
- We have had customers tell us that they can maintain the best level control on a head box with a Red Valve.

PAPER COATINGS APPLICATION VALVES

- PLANT:** Appleton Paper Company in Appleton, Wisconsin
- PROBLEM:** Heat in the coating area of the paper machine caused coating to deposit on valves making them inoperable. In addition, excessive heat wore out the cylinder seals fast.
- SOLUTION:** As many as 12 - 1" Type "A" valves with viton liners apply coatings to the paper. The flexing sleeve breaks up any dried solids and there are not cylinder seals to wear out. The Type "A" is a perfect coating valve.

HIGH DENSITY PAPER STOCK

- PLANT:** Bergstrom Paper in Neenah, Wisconsin
- PROBLEM:** When high density stock was watered down to make white water, Knife gates, the traditional paper stock valves, became too costly because of the cylinders required to actuate the valve.
- SOLUTION:** Performance has been perfect since installing a Type "A" 6" valve many years ago, because the valve closes by air in the jacket.

TALC

- PLANT:** Nekoosa Paper Company in Port Edwards, Wisconsin
- PROBLEM:** Talc is often used in the coating of paper. The talc gives a nice surface. Valves used on talc abrais very fast. Seats sometimes lasted only days.

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Website: www.ValveAndEquipment.com

SOLUTION: Red Valves were installed on the talc line. A Type "A" valve can be used on severe slurry with large particles like ash, or on highly refined abrasive slurry like talc.

PULPER WASTE

PLANT: Neenah Paper Company in Neenah, Wisconsin

PROBLEM: Valves rapidly wear out from repeated cycling on the pulper water system.

SOLUTION: Neenah Paper Company bought a 6" Type "A" valve in 1982. It cycled 300 times a week from 1962 to 1981. A new sleeve was purchased in June 1981. Over 1/4 million cycles was put on the sleeve.

LIME — A TRADITIONAL APPLICATION

PLANT: Rhineland Paper Company in Rhineland, Wisconsin

PROBLEM: Rhineland had constant problems with valves on the lime system. Lime system valves clog with solidified lime and debris in the fluid. Lime is added as a neutralizer before piping the waste to the waste treatment plant.

SOLUTION: After hearing of our reputation on lime in wastewater treatment plants, the mill tried a valve. All valves on the lime system were eventually replaced by Type "A" Red Valves. All mills have lime systems, and the valving is usually inadequate. Lime is Red Valve's best application.

WHITE WATER MIX TANK VALVES

PLANT: Kerwin Paper Company in Appleton, Wisconsin

PROBLEM: White water mixing tanks require frequent cycling of valves. Most valves wore out in a few months due to the large number cycling.

SOLUTION: Several 3" Red Valves are now cycling on-off white water, feeding a mixing tank. Other chemicals are added in the tank and the slurry is pumped to the paper machine. The valve sleeves are replaced every five (5) years with some having over one million cycles on the sleeve.

RECYCLED PAPER VALVES

PLANT: Green Bay Packaging in Green Bay, Wisconsin

PROBLEM: Recycled paper contains staples, binding thread, wire and plastic. These impurities were damaging to all valves.

SOLUTION: A Red Valve Type "A" was an obvious solution. A smooth venturi bore cannot clog or jam. It will close and seal on staples or notebook hinges.

PAPER COATING TANK VALVES

PLANT: Mosinee Paper Company in Mosinee, Wisconsin

PROBLEM: Paper coating contains clay, chemicals, talc, and latexes. When the coating dries, it forms a solid crust on valves as well as on paper.

SOLUTION: Mosinee mills use 2" Type "A" Red Valves on coating. The flexing action of the sleeve breaks up any solidified scale.

RED VALVE USAGE IN THE PAPER INDUSTRY

