

# VALVE SOLUTIONS

## PULP & PAPER

PBM PROVIDES THE VALVE PRODUCTS AND SERVICES NEEDED TO TAKE RELIABLE SAMPLES, MINIMIZE LEAKAGE AND PLUG FORMATION, REDUCE DOWNTIME, AND PRODUCE A SUPERIOR PAPER PRODUCT.

### TRANSMITTER ISOLATION VALVES WITH CLEAN-IN-PLACE

Valves in vapor recovery tanks allow the transmitter to read the level of black liquor. However, vapor can coat the higher of the two transmitters and its isolation valve. This coating solidifies and prevents the transmitter from getting an accurate differential pressure reading.

The PBM Transmitter Isolation Valve has a purge port and two milled flats on the ball facing the tank. Water or other fluid can be injected into the valve through the purge port and flow between the body cavity and the milled flats toward the



tank. This spraying action prevents the liquor from coating and solidifying on the valve. There is no process interruption during the procedure and the transmitter can obtain reliable readings.

A standard port permits calibration with the ball valve in the closed position.

### ANSI VALVES WITH CLEAN-IN-PLACE

Clogged valves can be commonplace in pulp stock or liquor lines. Pulp stock dewater and hardens, creating plugs, and liquor coats the valve and solidifies. Eventually, these conditions can cause a valve to become inoperable.

In addition, on the liquor lines, seats often become damaged. When the valve is closed, the liquor coats the ball and hardens. When the valve is opened, the solidified liquor scrapes against and damages the seats.

PBM's ANSI CIP valve prevents coating and plugging. The valve can be cleaned in place,



without process interruption, using purge ports and either one or three specially milled ball flats. A large flat allows cleaning of the ball's crown. Two additional flats on the downstream side of the ball allow cleaning of the downstream piping.



### SAMPLING VALVES WITH CLEAN-IN-PLACE

Sampling is an important part of monitoring the pulp and paper process. There are two common problems with valves used in sampling. One is that residual stock from previous sampling can contaminate the new sample. The other is that pulp fibers can get trapped in the closed ball port, sample piping, and body cavity. These trapped fibers dewater, solidify, and form a plug that makes the valve inoperable.

PBM solves this problem with Clean-In-Place capability. This distinctive design, with one purge



port and two milled flats, allows quick and easy cleaning of the valve without removing it from the line or interrupting the process. It ensures reliable samples and prevents plugs from forming around the ball and in the ball port.



## PIPE OR TUBE MOUNTED BALL VALVES MINIMIZE DEAD SPACE

Dead space is especially costly in a pulp and paper mill. Dead space allows pulp fibers or coatings to settle, dewater and form plugs. Eventually, this material can break loose into the flow path. If the fiber plugs get past the head

box, they can cause holes in the paper and costly reworking of the reel. Corrective maintenance requires an expensive cleaning process. PBM pipe or tube mounted ball valves use cavity fillers and specially-

designed cylindrical radius pads to minimize dead space where plugs can form. In addition, pre-loaded seats and the Adjust-O-Seal® feature prevent stock from backing into the body cavity when the valve is closed.

## FLUSH TANK VALVES IN THE COATING KITCHEN

Inoperable outlet valves at the bottom of mixing tanks are a common problem in the coating kitchen. Dense deposits of the coating mixture settle, then harden, in the dead space between the valve ball and the I.D. of the tank. This can freeze the valve.

PBM's solution is to use a specially-designed cylindrical radius pad to eliminate the dead space where the sediment accumulates. Cavity fillers can also be used



to minimize particles entering the body cavity and preventing the valve from operating.

## SP VALVES IN THE COATING KITCHEN

In the coating kitchen, the flow of pigments, adhesives, plasticizers and dyes is controlled by valves. It is not uncommon for valves to leak or for trapped latex or coatings solids to render a valve inoperable.

Poor stem to actuator alignment can cause vertically installed valves to leak at the stem packing. PBM prevents this leakage with Direct Mount Actuation and a live-loaded stem design. Direct Mount Actuation improves stem alignment and eliminates side loading of the valve stem.

In addition, using PBM cavity fillers minimizes



the chance of trapped material in the body cavity. Or, as an alternative, purge ports and milled flats can be used to permit Clean-In-Place without process interruption.

## PBM HAS SOLUTIONS FOR YOUR VALVE APPLICATIONS.

PBM COMBINES SPECIFIC APPLICATION REQUIREMENTS WITH CREATIVE ENGINEERING AND QUALITY MANUFACTURING PRACTICES. ADD PBM'S EXCELLENT SERVICE, AND THE RESULT IS SATISFACTION FOR YOU... OUR CUSTOMER.

PBM VALVES OFFER THE CONVENIENCE OF STANDARD FEATURES WITH THE OPTION TO CUSTOMIZE FOR A SPECIFIC APPLICATION. MOST PBM VALVES INCORPORATE PBM'S ADJUST-O-SEAL® DESIGN, AND MANY INCLUDE THE TRUE-BORE® PORT DESIGN. PBM VALVES FOR PULP AND PAPER PROCESSING ARE TYPICALLY FULL PORT DESIGNS, WHILE SOME HAVE THE OPTION OF A TRUE-BORE OR STANDARD PORT DESIGN. AND, ONLY PBM HAS THE ABILITY TO PROVIDE CLEAN-IN-PLACE CAPABILITY WITHOUT PROCESS INTERRUPTION.



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