

Salina Vortex 'Wye-Line' Diverters

ADM Milling groups valves into easy-to-service stations.

Wye line diverter valves, manufactured by Salina Vortex Corp., Salina, KS (785-825-7177/www.svortex.com), aren't a new product for Overland Park, KS-based ADM Milling Co. They've been used for over five

years at ADM flour mills in Chattanooga, TN, and Spokane, WA, according to Bill Foley, a project engineer at ADM Milling's Salina technical center (785-825-1541).

Foley says his company's millers like the Wye-line design, so-called because of the "Y"-shaped junction it creates in a pneumatic line, for several reasons:

- The positive-sealing valve is self-cleaning and can be used for switch-on-the-fly applications where there is no requirement to purge the line when switching from one line to the other.

- The seal plates are shielded from abrasion, providing long life, and when they finally do have to be replaced, the design makes the job simple.

Valve Stations

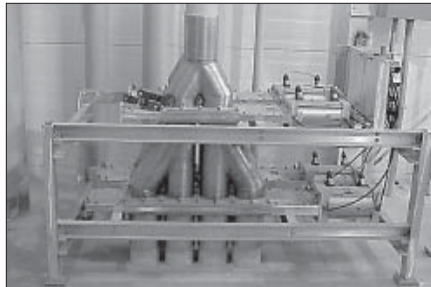
Typically, diverter valves are scattered throughout a bulk flour storage facility, wherever they are needed. However, ADM Milling, currently in the process of constructing a bulk plant addition at its West Plant in Arkansas City, KS (316-442-6200), has a different approach to the installation of 23 new Salina Vortex wye-line diverters.

Instead of scattering them throughout the bulk plant, Foley says, some of the valves are being grouped into a series of four valve stations. This provides several benefits:

- Valve maintenance becomes easier. Workers don't have to climb all over the bulk plant in order to reach the diverter valves.

- Having valves in central locations means fewer conduit and air line runs to control them. Not only does that save installation cost, but less conduit and pipe reduces the sanitation problem of keeping it clean.

Among the systems recently designed



Valve station 2 converges some lines from valve station 1 and distributes flour to one of two loadout rebolt sifters via 6-inch-diameter lines. Photos courtesy of ADM Milling Co.

and installed at Arkansas City:

- Distribution system for conveying patent flour from one source to 12 destination bins, using 5-inch lines, one three-way, and three four-way wye-line diverters.

- Distribution system for conveying clear flour from one source to two storage bins, using two two-way wye-line diverters with 2-1/2-inch lines.

- Transfer system from bulk flour storage to rebolt sifters for loadout, two sources to two destinations via 6-inch lines, utilizing two two-way and two four-way wye-line diverters.

- Transfer system from rebolt sifters to loadout stations for truck, rail, and packing lines, two sources to four destinations via 6-inch lines, using four two-way and one three-way wye diverter.

Among the ADM staffers involved in the design of the bulk plant, Foley says, were Dave Janssen, project engineer; Scott Ebbert, regional superintendent; Rick Walton, draftsman; and Steve Nelson, PLC programmer.

Product Features

Salina Vortex wye-line diverter valves are available in two-, three-, and four-way con-

CASE STUDY

Salina Vortex Wye-Line Diverters

figurations. Customers have a choice in product contact metal of stainless steel, aluminum, or carbon steel. Some additional features:

- Positive material and air shutoff in vacuum or pressure systems eliminates material cross-contamination and buildup beyond the closed port.

- Hard, food-grade polymer seals are designed with corrosion-resistant construction for longer life with a wide range of materials and reduced maintenance.

- A double-acting air cylinder provides instant response when diverting from one line to another.

- The valve design is more compact and weighs less than traditional cast-iron diverter valves.

Ed Zdrojewski, editor



Valve station 1 distributes flour to valve station 2 or to storage bins using 6-inch-diameter lines.