



Founded in 1953

Red Valve Company, Inc.

Food Processing case study

Glenwood Sugar Cooperative Sugar Cane Grinding Mill

The Glenwood Sugar Cooperative in Louisiana operates a grinding mill that processes sugar cane from local farms. Large evaporators are used to remove water and create a sugar syrup that is approximately 60% solids. This syrup is sent to a clarifier that separates out the wastes and introduces process chemicals to create a finished product.

Like any sugar cane mill, Glenwood has

a limited amount of time in which to process their local sugar cane crop. Processing equipment must be able to operate reliably under difficult conditions with no downtime to ensure maximum yield from the annual harvest.

One of the most critical components in this operation are the valves used to control the flow of the sugar syrup. Thick sugar syrup tends to scale onto anything that it comes in contact with, including pipes, tanks, fittings and valves. Scaling buildup quickly affects the accuracy of control valves and will eventually clog metal-seated valves completely, requiring a shutdown. Downtime seriously affects the overall yield and profits.

The sugar syrup flow must be controlled accurately. The addition of



Series 5200 Control Pinch Valve provides precise control and durability. No maintenance or downtime on sugar syrup service is required during the campaign.

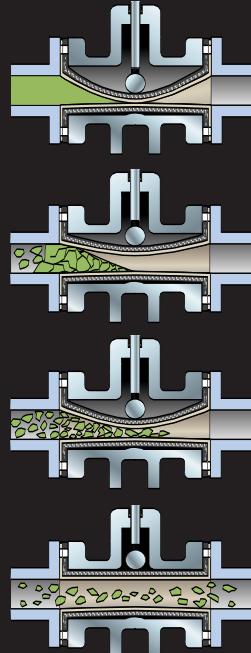
process chemicals such as caustic soda, phosphoric acid and Talodura polymer are added proportionately to the flow rate of the syrup. An uneven flow of syrup could result in over-dosing or under-dosing. The syrup also passes through a heat exchanger using steam to keep the syrup at the proper temperature. A steady flow makes the syrup temperature controller's job much easier.

To ensure accurate control with no downtime, Glenwood Sugar chose to install a Series 5200 Control Pinch Valve from Red Valve before the 1999 season. The Series 5200 features a durable reinforced sleeve that is designed to easily handle the thick sugar slurry. The flexing action of the pinch valve sleeve breaks off any scaling and keeps the valve sleeve opening unobstructed. Red Valve's patented cone sleeve trim is sized and specified to ensure accurate control and maximum rangeability.

Glenwood Sugar reports that the pinch valve provided excellent control over the 104 days of processing during the 1999 season. A post-processing inspection showed no scaling buildup and no noticeable wear to the pinch sleeve.

RED VALVES SELF CLEAN

The pinch valve sleeve's flexing action breaks away any solid or dewatered slurry buildup. The round port sleeve has no pockets where material can collect, bridge or plug the opening.



CONE SLEEVE ADVANTAGES

Cone Sleeve trim provides tighter control with a 20:1 turndown ratio and 0.89 recovery factor. Pressure recovery occurs downstream of the sleeve, so cone sleeves can handle a higher pressure drop than other sleeve designs.

