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 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 overdosing 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.