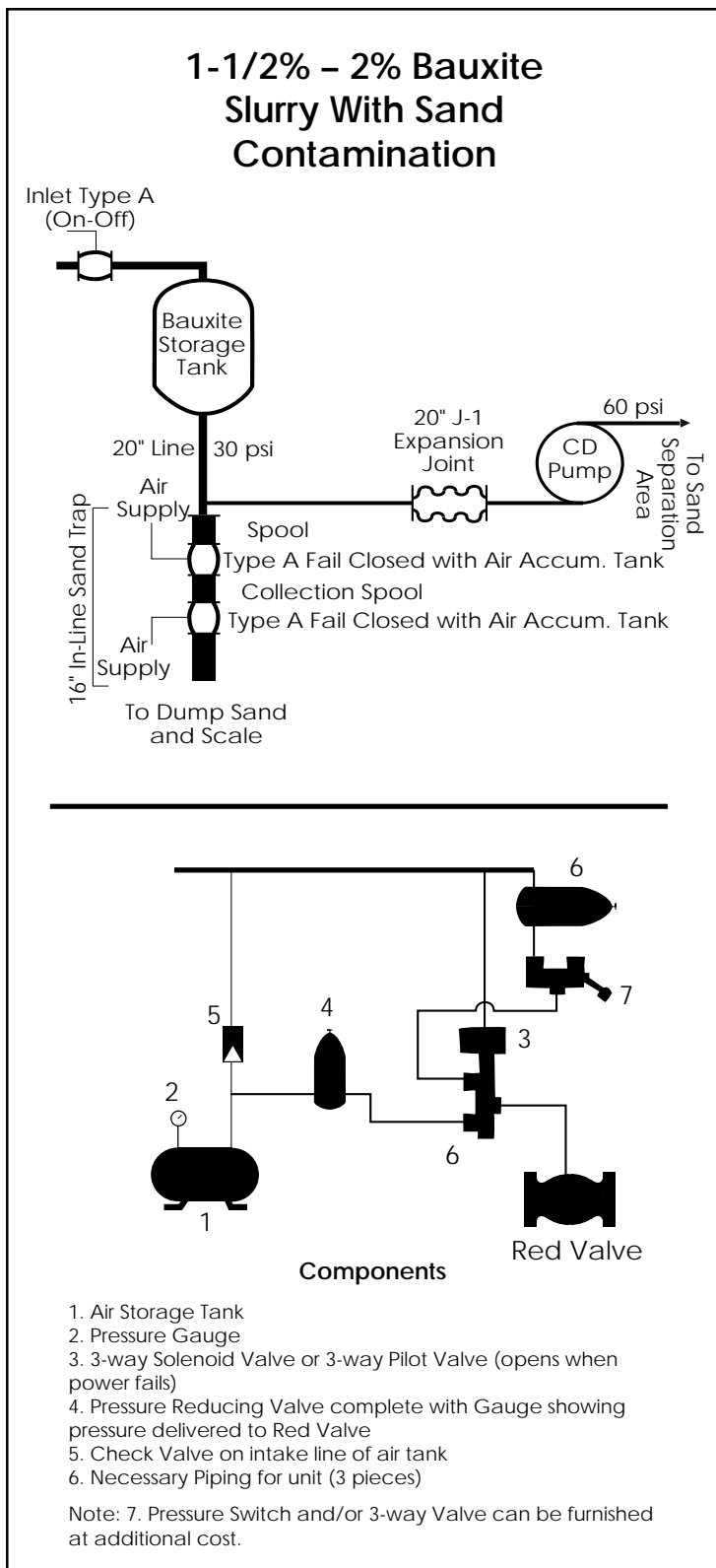


Application Data

Aluminum ♦ Bauxite Separation ♦ Type A & Redflex



This European alumina refinery uses pneumatic Type A Valves and Redflex Expansion joints on its primary bauxite treatment process for abrasion problems. The previous valve used was a diaphragm valve which caused difficulty with its short valve life from diaphragm failure and high maintenance. Additionally, these valves, being fail-closed, were very big and expensive with spring return actuators. In this area of the plant, space is in short supply. Type A Valves are nearly the same size as a piece of pipe, being very space efficient.

For this application, the Type A Valves are fail-safe closed through the use of air accumulation tanks. The piping system included a solenoid valve and check valve to prevent loss of air in the accumulator tank in the extent of plant air failure. Wear and service life were both improved through the use of pinch valves in these 16" lines. Also important is the fact that full port Type A Pinch Valves have a higher CV and flow capacity.

See the diagram inset lower left corner for a piping schematic for accumulator tank fail safe operation of Red Valve Type A Valves. For more information, inquire regarding Red Valve Series 700 fail-safe systems.

The primary transmission line from the storage tank is a 20" cast iron pipe. The pump is a centrifugal discharge design with a high level of vibration. The J-1 Expansion Joint was chosen to isolate the large 20" line from pump vibration and possible breakage and maintenance problems, the biggest problem being cracked and broken flanges. Start-up of this pump causes a tremendous pipe shock both up and down stream. This is, of course, the primary and most exemplary usage of Redflex Joints.

