Corflex supplies Pinch Valves for tailings project

Corflex has supplied an order of 450mm Pinch Valves to operate at a pressure of 25 Bar for a tailings project at Evander Kinross in South Africa.

Corflex supplies pinch valves suitable for higher pressures than any other similar Valve.

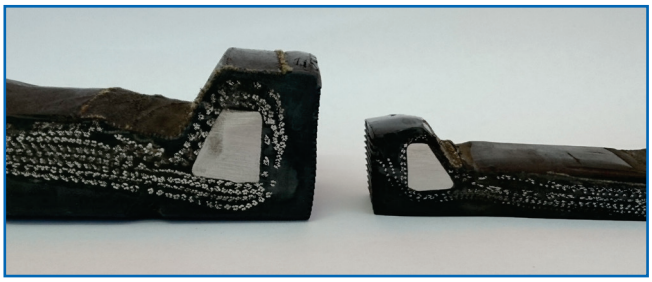
Pinch Valves are probably the most suitable valve for use in slurry handling, as in the open position they are similar to a rubber lined pipe. When closed they must seal and not be allowed to leak. Other types of valves have problems with abrasive material or pressure. Quarter turn valves such as plug and ball valves, generally have a reduced port which increases the velocity and every time you turn them they are scratched and end up leaking. Knife gates generally have blades that are far thinner than blank flanges for the same pressure and at high pressure can leak or form dished ends.

Pinch Valves for high pressures have to be built with both safety and performance in mind. To build a 450mm pinch valve sleeve for higher pressures special tooling had to be designed and built to enable the use of larger gauge wire reinforcement in the flange area.

The development of this tooling enabled a 450mm pinch valve to be built for a working pressure up to 35 Bar, a test pressure of 70 Bar and a calculated burst of 105 Bar. The force required to close and seal a 450mm Pinch Valve at 25 Bar is 77 tons to ensure an adequate seal. To build a 450mm Pinch Valve suitable for 25 Bar, a special valve had to be designed and built in every aspect similar to the 500mm high pressure Corflex Pinch Valve.

These 450mm valves are fitted with 4 x 160mm hydraulic cylinders, which at a hydraulic pressure of 200 Bar would seal the valves against a pressure of +/34 Bar, giving a sealing safety factor in excess of 30%.

The hydraulic power pack to operate the valves has a constant recharge system to ensure that the valves stay closed and do not creep open.



High pressure sleeve compared to lower pressure Corflex sleeve

450mm Corflex Pinch Valves at Evander

Although not required for this project the hydraulic power pack could have been built to automatically close the pinch valves in the event of an electrical power failure, which means the valves can be used as open/closed and non return valves. Typical non return valves in slurry pipelines are not always reliable so this system has excellent advantages.

Contact Corflex Engingeering,
Tel: +27 (0) 11 866-1932, Email: info@corflex.co.za,
Web: www.corflex.co.za