

## Pinch Valves Survive Continuous Sand Blasting

AKO UK introduce the pinch valve into one of the most abrasive applications;

Regular aluminium-body pinch valves from AKO UK are used throughout the Clay Cross foundry of Biwater Industries. Supplied in standard form with a polyester powder-coated finish, the present valves have so far endured five years of continuous exposure to the most physically-aggressive environment it is possible to imagine.

In their sand foundry Biwater produce chemically-bonded sand moulds to cast pipe fittings in the range 300 to 700mm diameter. Six sand mixers are supplied with sand routed through 100mm diameter AKO pinch valves, with sand from the sand-reclamation system. Each pinch valve passes up to 10 tonnes/hour of sand. The sand reclamation system in which the pinch valves work is part of the reclamation system integral to Biwater's environmental programme.

The abrasive friction of the recycled sand will wear out any valve liner. The AKO pinch valves are fitted with natural rubber sleeves, which are replaced every 9 months, on average.

The secrets of the sleeve surprisingly are also in the elliptical body shape of the AKO Pinch Valve. The body shape ensures the sleeve folds in the same place every time it closes, this results in a better mechanical memory ensuring longer life. This feature is unique to the AKO Pinch Valve meaning longer life than the pinch valve competition as well as very importantly having up to 40% less air consumption when in operation. Saving 40% on air consumption with a valve that is operating every 10 seconds on a 24 hour shift is a huge power saving to every manufacturer.

AKO pinch valves have been used in this plant for 18 years. Five years ago the older cast-iron bodied valves were replaced by the newer aluminium-bodied models, for the safety & convenience of the Biwater engineers. Lighter weight means easier handling of the valves, which are mounted at various levels. When replacing a valve for re-sleeving, the total process downtime is about 20 minutes.

Biwater opted for pinch valves because of their utter simplicity and reliability, There are no knives, gates, balls or bearings to clog with sand. In this hostile environment most valves, regardless of type, will need frequent refurbishment &ndash; and AKO pinch valves offer greatly reduced costs in this respect, since a new rubber sleeve is dramatically-less expensive than a reground butterfly seal, gate seat or knife blade. In addition, the 100mm pinch valve means a true 100mm bore, since there are no intrusive elements into the flow of sand. Sand transfer & mixing can therefore be carried out on a more-consistent basis.

Externally, the paint finish has protected the AKO pinch valve very effectively, with no visible damage after 5 years service.

With proven reliability in the industry for over 23 years many engineers, OEMS and manufacturers are now realising not only does the AKO Pinch Valve offer the best and most reliable solution for conveying difficult products, it can also compete and beat &lsquo;traditional&rsquo; valves on price. In the current ever-competitive UK market this is very important.