KelairPumps

PumpAction..... Issue 56 Jan 09

Case Study

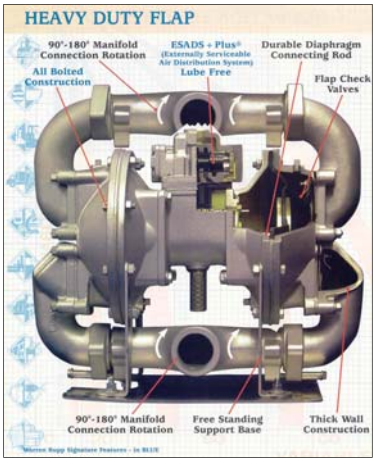
Sandpiper's flap valve suits slurries with solids

Sales Engineer Michael Waters TAS

A large timber processing company came to us with an enquiry for pumping out a sump in their plant. Our client needed to pump from the sump, which had a varying content of sawdust mixed with water, directly into an existing drain at a rate of approximately 80 l/min.

The pump offered was a 1" Sandpiper heavy-duty flap valve in Aluminum / Buna construction which is particularly good for handling slurries and fluids with some solids content.

The bottom-ported option was selected as it is better suited to handling fluids containing settling solids.



The Sandpiper flap valve pump comes in a range of sizes and construction options and offers all the same benefits as the other pumps in the Sandpiper range including:

- Non-stalling lube-free air valve design
- Fully-bolted construction
- 5 year limited product warranty
- Suction lift capabilities (up to 6m lift)
- ESADS (externally serviceable air distribution system)
- Dry run capabilities

The pump is situated above the client's sump, is manually controlled and happily pumps away whenever the client requires.

Products

- Pumps
- Steam Turbines
- Building & Fire
- Wastewater
- Service 24/7
- Spare Parts
- Sewage-Treatment

Call direct 1300 789 466

Case Study

Pulsafeeder simply reliable in chemical manufacture

Sales Engineer Michael Charnley WA

A major chemical manufacturer contacted Kelair Pumps to replace internal gear pumps which had been in service for several years with mixed results.

After comparing the flow per revolution of the gear pumps with the actual flow rates, we concluded the gear pumps, with the exception of one duty, were drastically over-sized for the service and the duty would be better served using Pulsafeeder simplex diaphragm head pumps.

As we had flow rates and head requirements for each pump we were ready to select the pumps. However, as a precaution, the site engineer recorded the actual chemical requirement over an extended period of time which shed an interesting result.

The original values were based on averages. In operation the range of flow rate was much greater than anticipated and resulted in reselecting the pumps.

Having this information allowed us to supply Pulsafeeder Omni metering pumps and a Hydra-Cell high pressure PD pump, controlled by variable speed drives to accurately provide chemicals to the process.

Case Study

Sandpiper unblocks waste

Sales Engineer Myro Bratkovic QLD

Collecting and processing grease trap waste can be an unpleasant task. Grease traps are found in commercial and retail areas in towns and cities. They are usually installed where there are restaurants and food halls and in these areas, all kitchen sink and basin water passes through a grease trap before the water is discharged to sewer.

Invariably grease traps are prone to unregulated water discharge. That is, whatever item can pass through and down a commercial kitchen drain, will generally be deposited inside the grease trap. Such items that can, and have been found in a grease trap can include food scraps, bones, cloth and paper napkins, cutlery (metal and plastic), drinking straws, etc. When full, the grease trap is emptied by a certified contactor who will remove the collected grease, oil, water and solids and transport it to a waste-handling facility for processing.

It is the solid matter that causes problems at these waste facilities. A major national waste management company encountered such a problem at one of their North Queensland facilities. At the facility, the grease trap waste is unloaded through a macerating pump to a large waste-holding tank. Once inside the vessel, by virtue of the centrifugal stirring action inside the tank, a portion of the solids centrifuge out and at times the fibrous solids re-weave in the tank to form something like a stringy rope.

It was at this stage of the process that pumping quickly became a major problem for the client. Initially they purchased a 3" air diaphragm pump fitted

with "ball check-type" valves to transfer the solids laden water to the next stage of the process. The problem was that a regular "ball valve-type" diaphragm

pump has limited solids-handling capability.

Such was the magnitude of the problem for the plant operators that the original pump would block daily. Sometimes on a bad day, the pump might be cleaned out up to 8 times. Not a pleasant job for the operator.

The ability for a pump to handle pipe-sized solids in this difficult application is mandatory.

Kelair's Queensland Manager and local representative Myro Bratkovic was asked if there was a solution to the problem. The client was already a major Sandpiper diaphragm pump user and was aware that a Sandpiper 50mm "solids-handling flap valve" pump was made, but did not know that a larger 75mm pump was also in the portfolio. In fact a competitor had advised the client that Warren Rupp who manufactures Sandpiper pumps no longer built a 75mm "solids-handling flap valve" pump.

Myro looked at the application and liaised with the client at length. After having such a bad experience with the competitor's 3" ball valve pump, the client was a little reluctant to spend more money on a product that possibly may not fix the problem. From past positive experiences Myro was extremely confident that the Sandpiper 75mm HDF (Heavy Duty Flap Valve) pump was the right pump for the application.

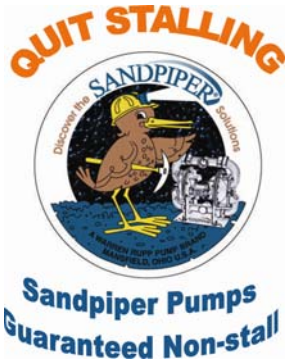
Kelair then provided a brand new pump for a 30 day trial.

The Sandpiper 75mm Heavy Duty Flap Valve pump is designed to pass pipeline-sized solids without blocking. In layman's terms this means that if a solid particle can pass down the suction pipe into the pump then the Sandpiper Flap Valve pump should pass it without blocking.

The Sandpiper 75mm Heavy Duty Flap Valve pump operated successfully over the trial period and the unit was purchased by a very satisfied customer.

Sandpiper Features and Benefits

- Non-stalling guarantee
- Cross-drilled technology, to eliminate stalling
- ESADS (**E**xternally **S**erviceable **A**ir **D**istribution **S**ystem, allowing repair of pump without removing from pipeline
- Fully-bolted design, minimising repair time and reducing maintenance cost
- Lubrication-free, eliminates requirement for lubricators, reducing initial cost and maintenance cost



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