

Case Study

Viking pumps to the rescue in resin process

Sales Engineer Anthony Sidawi NSW

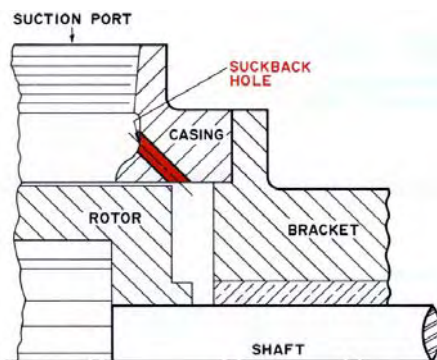
A major company in the building industry in Sydney was using an external gear pump to transfer resin in its process. The client was having continual problems with the existing external gear pump which was Cast Iron construction with packed gland shaft seal, and the repair cost was very high.

The client wanted a mechanical seal pump to minimise the leakage and mess that the packing creates

After spending some time working with the client to understand the process, a Viking Gear pump was suggested.

After discussions with Viking's engineers at its head office, USA about the process, Kelair offered a universal bracket Viking pump with hard-face mechanical seal with pinned stationary seat.

When the pump is idle for a period of time, a high torque is required to start up the pump because the resin settles between the faces. The pinned stationary seat ensures that the high torque required does not spin the stationary seat with the



rotary seat, causing the seal to fail.

Kelair also offered a suck-back hole in the pump. As liquid is moved through the Viking pump from suction to discharge ports a small amount seeps or "slips" back from the discharge port to behind the rotor then to the suc-

tion port. It is called slow moving liquid.

For most applications the slip presents no problem. However, for liquids such as resin and chocolate there are conditions under which the liquid behind the rotor will solidify and stall the pump. By using the suck-back hole, which is a hole drilled in the casing from the suction port to the area behind the rotor, the hole tends to promote additional flow through the area by reducing the pressure. With more flow the liquid is less likely to stagnate or settle.

Kelair was confident of the success of the Viking pump in this application, and offered a four-week trial before the purchase of the pump.

The pump has been in operation for two years with no problems. The client purchased seven Viking pumps to replace the other external gear pumps.

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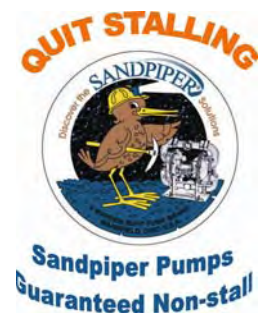
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News - New Service Division opens in Queensland

Kelair Pumps is pleased to announce the opening of its new Service Division based at our office and workshop facility in Meadowbrook, Brisbane. The Division is now open and available for all on-site and in-house pump service requirements.

"There has been a growing demand by customers for Kelair to service its own, and competitor's pump products in South East Queensland. The ability to provide service in Brisbane and the South East has now greatly expanded our capabilities. This will be a major area of growth for our business in Queensland and our Brisbane office is now truly a one-stop facility for pumps, parts, accessories and repairs," says Queensland Branch Manager, Myro Bratkovic"

Kelair's service will include emergency and general breakdown repairs, routine preventative maintenance, general overhauls and upgrades, shut down maintenance,



installation and commissioning of pumps for the Fire, Building Services and Industrial markets. We can also

look after most pump ancillaries such as valves, filters, float switches, reprogramming of pump variable speed drives, as well as resetting pump pressure systems.

Our workshops and service vehicles are equipped with an extensive range of stock and we pledge to provide all valued clients a written inspection report within 24hrs. As with all our products, our workmanship is guaranteed.

Kelair's Queensland Service Division is backed up competently by experienced Sales Engineers, Paul Hodgkinson for Building Services and Fire Products, and Rudi Jahrig for Industrial pumps and products.

Please feel free to contact us in Brisbane 1300 789 466 or 07 3805 6308.

Case Study

LaBour's robustness bears up beautifully in fuel transfer

Sales Engineer Alex Calodoukas NSW

Recently one of Kelair's customers requested a centrifugal pump for fuel transfer between the flow-rates of 20 LPM and 1,100 LPM. That's a huge variation in flow. The duty would be intermittent not continuous, but regular daily duty nonetheless.

Typically centrifugal pumps are recommended to have an operating envelope between 50% Best Efficiency Point (BEP) and 115% BEP. These limits are due to high radial loadings on the pump shaft. Operating the pump any further from the BEP, and bearing life can be significantly shortened, and rotating type mechanical seals can fail prematurely (though cartridge mechanical seals can compensate far better).

ANSI B73.1 build specification calls for heavy duty design. That means heavier duty bearings and a thicker pump shaft with less shaft overhang (from bearing to impeller). This robust design gives the pump the added strength to operate effectively and for long periods of time at regions further out than 50% to 115% of BEP. In fact, the particular size

ANSI B73.1 specification pump we chose is so robust, it is recommended to operate from as far out as 32% BEP up to 155% BEP.

This advantage alone, however, did not solve our problem. If we had to operate the pump at 20 LPM for any length of time, it would still mean premature bearing failure. We had to overcome that aspect.



In discussions between the customer, the pump manufacturer, and ourselves we resolved to introduce a 450 LPM re-circulation line to send fluid back to tank whenever the pump would operate. We could then size the pump for larger flows, eg 470 LPM and 1,120 LPM. As the pump build is so robust, the pump manufacturer quickly approved the duty. Our problem was solved. As stated above (in percentages) the pump is

approved to operate at flow-rates as low as 350 LPM (32% BEP) and up to 1700 LPM (155% BEP) -without trimming the impeller. Even though using a re-circulation line would require slightly more power, the fix far outweighed the disadvantages. The other alternative may have been to use three separate pumps in total (plus motors, pipes, plinths, etc) to cover the whole gamut of required duties.

LaBour pumps gave us the capability we needed. LaBour incorporates some of the heaviest duty bearings in the ANSI pump industry. It also offers the thickest shaft to shortest overhang ratio (L3/D4) in the ANSI pump industry -commonly termed the highest "stiffness ratio".

This makes them an extremely robust unit, capable of withstanding very high shaft loading without the detriment that would occur to a lesser pump.

In addition, LaBour can build full 316SS casing pumps typically in 4-6 weeks (ex works, USA). This makes the LaBour pumps even more attractive when lead times are tight.

Sandpiper Features and Benefits

- Non-stalling guarantee
- Cross-drilled technology, to eliminate stalling
- ESADS (Externally Serviceable Air Distribution System, 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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