

Media Release – CUT TO SIZE PLASTICS – February 2017

Cut To Size's creative solution solves Clean In Place pump service life issue for Euro Pumps



New valve cages (left) were wearing out far too quickly. New high-performance valve cages (right) suggested by Cut To Size Plastics were a welcomed solution

Sometimes parts that are providing reliable, long-lasting service can suddenly begin to fail when the conditions change. Such was the case recently for leading Queensland food and beverage industry pumps and cleaning systems provider Euro Pumps, who needed to raise the temperature from 55°C to 75°C at an abattoir.

The abattoir had recently varied their livestock mix, and the 20 degree increase in temperature was necessary to cope with changes in fat and blood adhesion and soiling on production line equipment. The increase in temperature was effective in cleaning the production line equipment, but it caused an unexpected side-effect – the nylon-cased

Clean In Place (CIP) pump valves began to fail incredibly quickly.

The initial solution attempt was to custom manufacture new valve cages from stainless steel, which brought about other issues causing the stainless-steel springs to break and fail. Further investigations showed that the spring breakage was attributed to the stainless steel binding on stainless steel, so the solution was electro-coat the springs, however this did not prove to be a long-lasting solution as the coating quickly wore off.

A suggested anti-seize type compound was not an option due to the hot (75°C), high pressure (100 Bar) water flowing through the system. By this time the customer was getting anxious and the problem needed to be solved quickly.

Euro Pumps Product Development Manager, Joanne Field says they were stumped, until they asked Cut To Size Plastics for some help. "I called Cut To Size's Technical Sales Representative, Campbell Parminter, who immediately started thinking outside the box," she said.

"After examination of the original cages, material identification and a check for chemical compatibility with common additives to water, Cut To Size identified that the failure was due to accelerated chemical degradation due to the elevated heat in a chemical environment and not just heat, as was first suggested," she explained.

Cut To Size recommended a special high performance polymer to solve the problem. This test polymer was highly successful and has passed a standard service life test of 1,000 hours. Further testing is still under way and both parties are expecting it to far exceed the standard 1,000 hours.

"The solution was a great example of how teamwork between suppliers and customers can yield outstanding results. Before we contacted Cut To Size, some of these pumps were wearing out in as little as one week and our clients need a much more reliable performance than that. Campbell and I enjoy working together on solving problems," said Ms Field.

"Now they're not only lasting the industry standard, but we are aiming to well exceed it, pending the results of further testing," she said.

Mr Parminter is happy with the success of the solution, which he hopes will further cement Cut To Size's relationship with Euro Pumps. "Our attitude is always to find the best way to solve our customer's problems, we listen and ask questions – we never put a project in the 'too hard basket'," he said.



Old Nylon Valve cages and the stainless steel solution (left) and Cut To Size's new special high performance polymer for Euro Pumps' pump valves (right)