



A seal of quality

Case study #3

Progress
Engineering
Limited

t 01208 261210

Bespoke machining
and fabrication

When a food manufacturer had trouble with valve sealing on its mixers, PEL's expertise was called upon to assist with the design and manufacture of the new components with long-lasting improvement in mind.



Process Components and PEL

Process Components Ltd manufactures and supplies a variety of valves, discharge aids, components and spare parts for the powder processing, liquid processing and bulk handling industries.

One aspect of PEL's involvement with PCL has included machining of rings, in aluminium, phosphor bronze and stainless steel, for the Mucon brand of valves used in food and pharmaceutical applications.

The challenge

The present case study concerns a replacement outlet plug valve for a large industrial food mixing machine at Marlow Foods.

Instead of a straight replacement of the old components with new, Marlow wanted to find and trial a modified valve design which would give a better seal than the existing valve which was causing health & safety and production problems.

The solution

PEL and PCL discussed the necessary modifications and worked together to find a solution. A key challenge was the complex machining needed to achieve the correct scalloped shape for the top of the valve, which has to match perfectly with that of the mixer's trough. There can be very little tolerance in the 'seat' dimensions.

Internal stainless steel surfaces, which would be in contact with food, had to be highly polished, while glass bead blasting was used to provide an appropriately smooth outer finish.

The results

"We were very happy to help in developing a new design," says PEL's Managing Director David Cottam. "The new plug valve is very high quality and ensures no leakage. It is well suited to the efficient opening and closing system that Marlow wished to use on all their mixers."

"PEL was the obvious manufacturer to approach when Marlow asked us to assist with its ongoing mixer valve sealing issue. The team at PEL not only offered expertise in stainless steel manufacturing but had a deep knowledge of this kind of process equipment. This meant they could understand and interpret our expectations for quality and finish, which helped us to meet our customer's need. The manufacturing process went well and PEL's advice on improvements was highly valuable. Overall the service was excellent and we will certainly continue to use PEL on a very regular basis."

Tony Goodwin, Managing Director, Process Components Ltd

