



Case Study

SEALING & POLYMER



Industry sector:

PAINT MANUFACTURING

Application:

PAINT PRESERVER LINE

Actual saving:

£1,580,000

Payback period:

IMMEDIATE



**Demonstrated
technical
KNOW-HOW and
expertise**



**ACCESS to ERIKS
strong and reliable
SUPPLY CHAIN**



**INCREASED
SAVINGS through
retro-fitted
design**

Preserving the Paint Line... and the customer's bank account

No matter where you go, it is a guarantee that you will see something that has been painted. Whether that be a car, a fence or a picture. Paint gives things a clean and fresh appearance, a new lease of life you might say.

But the process it undertakes before it hits the shelves in our local DIY stores is far more complex than you may think.

It's strict, laborious and extremely costly, as one multi-national paint manufacturer was frequently finding out.



THE ISSUE

The paint manufacturer had recently installed a new wood preserver paint line at its facility, which consisted of eight pump assemblies.

Unfortunately, within the first 24 hours of production, all eight new pumps were failing due to paint leaking through the mechanical seal faces. Production was being stopped immediately, putting on hold the required 2,000 litres of paint which was to be produced every hour.

To resolve this issue, at a huge inconvenience, the manufacturer was having to dismantle the pumps, clean the seals and refit all assembly components. This was required two to three times per day, drastically slowing down the production line.

Discussions with the OEM followed, but it was confirmed that to get the paint line back up and running to its required standard, it would take approximately 12 weeks. Calculations revealed that a 12 week stoppage would generate a lost saleable opportunity of £1,500,000. Broken down, that equalled £25,000 per day, for five days a week, for three months.

“ A lost saleable opportunity of £1,500,000 ”

Cost and profit losses of that magnitude are extremely hard to comprehend, but a visit from ERIKS specialist Sealing & Polymer division would get production back up and running again in no time.

THE SOLUTION

With production constantly coming to a grinding halt, and money being lost, the customer required an urgent solution.

Taking a closer look at the problem, the ERIKS Sealing specialists decided to invite one of our partner suppliers to site to discuss possible options. During the visit, an interim solution was devised and agreed, which would see the existing seal faces removed and relapped.

The early proposal would allow the customer to be back in operation with 24 hours, and although not at optimum efficiency, it gave the ERIKS engineers time to find the root cause of the issues.

“ Re-engineering using Silicone Carbide ”

Following further examination and discussions between ERIKS, the customer and supply partner, it was decided that the seal faces in the current arrangement should be re-engineered. This time using Silicone Carbide instead Chromium-Oxide.

Microns thick and porous, the current Chromium-Oxide coated plate was running against Carbon Steel which was also porous.

Contact fluid was then balling up between the seals on the plate. Switching the main seal to Silicone Carbide would significantly reduce this problem.

Additionally, the plate was bored into and sat in a rubber boot, before being fitted with a Silicone Carbide face.

Now, when the two seal faces meet, nothing can ball up the material. New seals were retro-fitted into the existing pump mechanical seal housing for all eight pumps.

“ Back in operation within 24 hours ”

THE FUTURE

Since the retro-fit, the customer has reported back to ERIKS with no mechanical seal failures. A truly drastic change from the two to three daily issues.

Through ERIKS, the customer also ordered four new mechanical seals, with the correct Silicone Carbide arrangement, as spares.

Not only did the customer avoid unimaginable production losses of £1,500,000, but the new seal arrangement eliminated the purchase of a new pump installation, which would of cost an additional £80,000 just as an initial outlay.

In the end, after a single visit from ERIKS, we had one extremely happy customer.

OUTCOME AND BENEFITS

- Immediate saving of £1,500,000 through increased production
- Additional £80,000 saving thanks to ERIKS finding a solution rather than purchasing a new assembly
- Solution was retro-fitted to ensure quick turnaround
- Four further orders have been placed as spares