

Case Study

Electro Mechanical Services



Summary



Industry: Water and Wastewater

Application: Pump Refurbishment

Actual Saving: Estimated £15,000

Payback Period: Unknown



Screw Pump Failure

ERIKS rectifies failing screw pump repair from another engineering company

ISSUE

ERIKS received a call from a large UK water company requesting that we attend site to investigate a failing screw pump.

On attending site and having in-depth discussions with local Waste water staff it was concluded that the pump in question had been recently refurbished by another engineering company.

Once we had undertaken a site inspection on the pump it was found that the gap between the flighting and the concrete screed was approx. 60mm, the optimum gap should be 6mm. This extensive gap was the main factor in why the pumping capacity of the pump was greatly reduced

The client was informed that the way forward would be to remove the screw from the trough, remove and replace the screeding, replace the auger, undertake the reinstallation, returning the pump to full pumping capacity.

OUTCOME AND BENEFITS

The entire work scope took 7 weeks, and was more cost effective and quicker than full replacement, saving the client costs relating to additional over-pumping that would have been required, and also greatly reduced the threat to the treatment process.



SOLUTION

In discussions with the client it was made clear that replacing the screw, with its very long lead time, 24 weeks, was not an option as the treatment process would not survive the reduced RAS flow, thus threatening the aeration lanes.



The pump clearly required repairing in a short space of time as the reduced flow rates were already having an effect on treatment of the wastewater.

ERIKS came up with a plan that would return the pumping flow of the pump to full capacity in the shortest possible time span.

The screw was removed along with the screeding, that was also replaced. The screw was then set up on running bearings, cutting equipment was set up which used the centre shaft of the auger as a datum



guide. Cutting equipment then removed a given section of flight to return the flights to a parallel consistency along its entire length.

A replacement steel flight section was then produced; this was welded onto the remaining flight section, returning the screw diameter back to original dimensions. All work was done on site, reducing transport costs, and more importantly saving time.



MORE INFORMATION

ERIKS Industrial Services

Amber Way, Halesowen, West Midlands B62 8WG

Tel: 0845 006 6000

Web: www.eriks.co.uk