Waste Water

Application Data No. 195 05/11

NOV[®] MONO[®] AIDS ACTON BRIDGE WITH INCREASED CAPACITY

A high performance packaged pumping system from NOV Mono has been specified by United Utilities to enhance process efficiency at its pumping station in Acton Bridge following an increase in capacity at the site.

The pumping station began experiencing problems with its existing equipment, which following the addition of raw sewage from a local bar and restaurant, could no longer cope with the full pressure of the discharge head within the rising main which runs at just over a mile.

United Utilities needed a solution which could handle the change in capacity and full pressure of the rising main, but also allow the pumps to be dismantled and maintained in a restricted space due to the constraints of the existing pumping station.

Ian Warburton, Field Service Engineer at Acton Bridge, commented: "Having unsuccessfully trialed a number of alternative technologies, we decided to call upon NOV Mono to provide the answer. We have used NOV Mono products for over 15 years at a number of our sites and we know that they are extremely reliable and the standard of workmanship they provide is always outstanding.

"By combining two of its revolutionary maintain-in-place NOV Mono EZstrip™ progressing cavity pumps with two high performance macerators, NOV Mono provided us with the ideal solution.

"The installation process as a whole was extremely smooth and we are very happy with the service that the NOV Mono team provided. I have worked with many subcontractors over the years and have never come across a team more willing to go the extra mile."

NOV Mono's EZstrip[™] progressing cavity pump is the biggest leap forward in

progressing cavity (PC) pump design for 30 years and is an extension of NOV Mono's popular Compact C Range. The EZstrip[™] has been specifically designed to provide a quick and easy way to disassemble, de-rag and maintain a PC pump in-situ, eliminating the costly maintenance and down time that servicing can often cause.

With a capacity range of up to 500m³/h raw sewage, NOV Mono packaged pumping systems typically combine a progressing cavity pump with a solids grinder, which enables the use of a 'small bore' rising main system. This involves significantly lower installation costs compared to a traditional 100mm rising main sewer – up to 75% savings can be achieved.

The positive displacement action of the pump in the packaged system lifts the raw sewage from the sump into the cutting chamber of the macerator/grinder. By using a larger bore elutriation pipe for the pump suction hard heavy objects are left behind in the bottom of the sump and so cannot cause any damage to the pumping equipment. The sewage and any textile and fibrous matter is macerated and then pumped away into the main gravity sewer.

The reduced pipe size also increases the velocity of the sewage, providing an optimum flow rate, eliminating the risk of solids settlement and septicity. With this method of solids handling, the final effluent being discharged to the treatment works arrives in constant, short discharges, minimising shock loading and downstream blockages.

| Package: | 2 x Z14B EZstrip Pumps 2 x M18C macerators |
|-------------|---|
| Product: | Raw sewage |
| Capacity: | 7m³/h |
| Pressure: | 6.43 bar |
| Pump Speed: | 510 rpm |
| Drive: | 3kW motors |



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