

‘SUPER’ CHOPPER PUMPS SOLVE SOLIDS PUMPING BLOCKAGES

The Problem

Sewer blockages have been in the news recently and given the scale of the problem, it's hardly surprising. Of the 366,000 sewer blockages occurring in the UK around 80% are caused by the presence of non-flushable items, of which the biggest offender is wet-wipes. The man hours and costs associated with manually lifting pumps and clearing the blockages are eye-watering with one region alone, North West Water, estimating the costs at around £10m per year. As a result of the aggressive marketing of wet wipes around 3 million homes in the UK now use these products and the figure is growing.

The Solution

Through their experiences with a number of the UK's water companies in dealing with blocked sewers, Huntingdon based P&M Pumps the UK distributor for Vaughan Chopper Pumps, have succeeded in providing a solution by replacing failing submersible pumps. For example, at Anglian Water's pumping station in Cambourne two Vaughan 30kW / 1460rpm SE6W chopper pumps were specified to handle flows up to 400m³/hr at heads of 17.8. A simple and quick retro fit was all that was required utilising all the existing installation hardware and this provided an effective solution to prevent blockages and instances of drains 'backing-up'.

The innovative design of the Vaughan Chopper pump makes it particularly effective in the most challenging solids pumping applications that cause other solids handling pumps to fail when faced with the challenge of non-flushable items. The seal design on Vaughan submersibles has proven to be reliable and durable assisted by the patented upper cutter

design. Stray solids that may be trapped within the mechanical seal chamber are shredded and removed by the impeller pump out vanes turning against the upper cutter.

In addition, solids are then chopped by the cupped and sharpened impeller blades turning across the cutter bar, creating a smooth 'slicing effect' enabling the conditioned slurry to be easily pumped upstream through the piping system without plugging.

Finally, a centred nut with a tooth cuts stringy materials that tend to wrap at the pump inlet and where non-fibrous hard solids are present there is the option for a (removable) disintegrator tool which agitates and breaks up large solids to prevent suction blockage.

The Benefits

Graham Powell, Maintenance Engineer at Anglian Water comments, *"The pumps are performing very well and we are singing their praises across the business"*. More recently, Andy Spencer at Anglian Water confirms *"Since the two Vaughan Pumps were installed we have yet to return to the site to unblock either of the pumps, whereas before we may have been on-site at least once a week with two operatives"*.

Through their experiences at Anglian Water and numerous other waste water treatment sites across the UK, P&M Pumps have demonstrated that Vaughan Chopper Pumps are an effective solution to the most challenging 'solids pumping' situations where other types of chopper, macerating or whole solids passing pumps have traditionally struggled.

In most cases, retrofitting a Vaughan Chopper Pump into a problematic area improves the whole process and will be self-financing, with unrivalled payback periods in some cases being a matter of months, thereafter minimising the effect to the budget holders. ENDS.

Further information on Vaughan Chopper Pumps is available from:

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