

Mono® NOV Munchers Clear Up Pumping Station Blockages

Pump blockage problems at a sewage pumping station in the U.K. have been completely solved by the installation of Munchers from Mono® NOV, resulting in more efficient operation and improved health and safety.

Broadbottom pumping station in Manchester was built in 1991 to deliver an average daily flow of 70 megalitres of domestic sewage to Hyde Waste Water Treatment Works, five miles away.

Before the installation of the Muncher twin shaft grinders to protect the three sets of duty, assist and standby pumps - six pumps in total - there were serious problems with 'screenings' waste material, particularly rags, during storm conditions.

The centrifugal pumps in use at Broadbottom are designed for high lift height, with a clearance between the casing and the two impellers of just 0.04mm which became blocked by screenings in storm flows.

The resulting blockages required the two-man maintenance team responsible for Broadbottom and three other sites within a 20 mile radius, to spend an inordinate amount of time unblocking the impellers by hand. Each pump took, on average, an hour to clean, and the maintenance staff could expect to be called out to deal with blockages at least once a month.

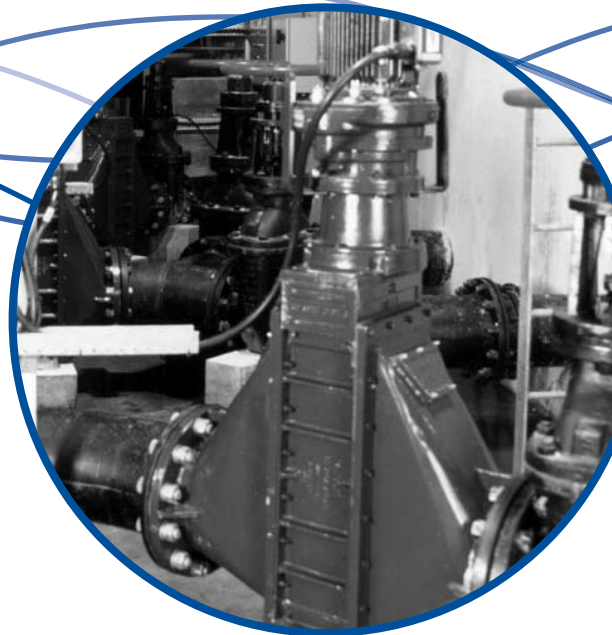
The need for manual cleaning, particularly of waste which frequently contained sharp objects such as syringes and razor blades, also raised health and safety concerns.

As a result of the blockages, storm water discharge consent levels were in danger of being exceeded. Under normal operation, two of the three pairs of pumps would keep the system within the consent levels. However, any blockages would rapidly lead to possible breaches, particularly due to the time required to unblock the pumps once the alarm was triggered.

Since the installation of three Series 'A' Munchers in April 1995, there have been no problems with blockages or in meeting the NRA consents. The only maintenance required has been the works normal daily 30 minute check of the whole system.

Designed specifically to cope with modern sewage flows, the Munchers feature shafts fitted with interleaving chrome molybdenum steel alloy cutters and spacers to give 'positive displacement' solids grinding.

The differential speed of the unique patented design cutters pulls and teases apart fibrous material. The leading edge and sides of the cutter teeth crop and shear plastic into small strips and the circumferential land of the cutter crushes friable or brittle waste. The resulting pulp can then easily be pumped to the STW along with the rest of the flow.



Muncher: 2 off CA206FBW5B2
1 off CA206XBW5B2

Product: Domestic Sludge

Capacity: 107 l/s

Drive: 2.2kW motor



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Mono® NOV

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