

Location: Belgium

case study: 02-2021

Raw Sewage bypass for school construction

*The Pump People®*

BACKGROUND

Sewage bypasses is a typical application for our Gorman-Rupp Self-priming pump. In this case, a primary school in Belgium wanted to build an additional building in order to be able to accept more students from this region. However, the location of the new building was located on the sewage system of the school. They needed to demolish the existing sewage system and rebuild a new one a little further down in order to build the new facility.

THE CHALLENGE

The challenge was that no lifting equipment whatsoever was allowed on the construction site and it could only be accessed by foot. We usually make use of a forklift to bring heavy piping but in this case, it was not allowed. Only the crane which can be seen in the background was used to place our two pump sets. Small diameter pipes were used as they could be lifted by

hand. In addition, there was a very long discharge line (450m) that had to go around the whole construction site.

The small diameter, combined with a very long discharge line meant more friction losses and therefore required a pump that could deliver high pressure.



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THE SOLUTION

We opted for the self-priming centrifugal pump, our V3B60. The V3 pump provides superior solids-handling and increased pressure capabilities, it can deliver a maximum flow of 190 m³/h and a maximum head of 34m. We provided two of these pumpsets configured with 11kW electrical motors (1 working + 1 spare) to create a bypass while the new sewage system was under construction. The pumpset was equipped with automatic level control and remote access to the parameters of the installation. The client received a text message if there was a problem with the pump or if the water level in the sump was too high and about to overflow.

Another reason we chose the V3 pump is because this pump can handle big solids, it has a solids handling capability of 76mm (3"). The sewage was a mix of dirty and clear water (shower, toilets, etc) created by the school.

These pumps were in place for 1 year undergoing the construction of the new sewage system.



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