

Sulzer called in to overhaul storm pump after extended delays

Stormwater pumps will often be motionless for extended periods of time, but when water levels rise, they must be able to perform at a moment's notice. Achieving the necessary reliability requires regular maintenance and periodic component refurbishment. However, when an original equipment manufacturer (OEM) was unable to supply parts for 12 months, a water supplier called in Sulzer to support an urgent maintenance project.



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James Wright, Business Development Manager Water, Sulzer



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The storm pumps at a wastewater treatment plant had been in operation for around 25 years and had reached the point where a complete overhaul was required before a potentially serious failure was experienced. Regular vibration monitoring had highlighted the need for a refurbishment, but the situation had been exacerbated by the lack of support from the OEM.

Beating the OEM's offer

The maintenance team at the plant had become frustrated by the delayed support from the OEM and started the process of removing the first pump. During a visit by Sulzer to the site to discuss the maintenance of a set of unrelated large pumps, it transpired that the site team had been waiting for the OEM to provide spare parts and service visits for over 12 months.

James Wright, Business Development Manager Water, for Sulzer comments: “Having detailed what Sulzer could offer in terms of support, we took the opportunity to look at the pumps during the visit. We explained how we would lift and transport both the pump and motors to our service center as well as the timeframes involved in completing the necessary work.”

A number of factors persuaded the utility to select Sulzer to complete the work, not least the competitive tender, which was 25% below the investment required by the OEM. Furthermore, being able to provide a full turnkey solution to the full equipment and the proximity of a Sulzer service center to the site, as well as the speed in which the work could be completed, were also favorable.



Cutting lead times

Sulzer put together the complete lift plan documentation as part of the method statement and risk assessment, all of which are essential for projects such as this. The pump had to be partially disassembled and removed in three sections. The service center designed and manufactured a specialist lifting tool that was tested and certified before being used by the field service team to remove the pump from the dry well.

The process was further complicated by the fact that the main shaft, which required replacement, would not come apart and had to be cut in one place to enable removal. Sulzer provided a solution to manufacture a new shaft section after the OEM provided a lead time for a replacement of several months.

The project involved the complete overhaul of the pump and motor assemblies, all of which could be completed at the same location. As a turnkey solution, Sulzer provided field service engineers to arrange the lift and removal of the pump as well as the reinstallation of the full unit including motor, after the refurbishment had been completed.

One-stop-shop for maintenance

Once the pump had been disassembled, all the components were inspected and identified for replacement or re-engineering. A considerable amount of corrosion was found on the impeller and the suction sleeves. Sulzer applied a specialist coating on all parts that required additional protection against corrosion to extend the operating life of these components.

During the project, some of the maintenance team from the wastewater treatment plant visited the service center to check on progress and see for themselves the levels of corrosion inside the pump. Sulzer's open-door policy means customers are always welcome to call in and see the ongoing work.

Having discovered the full extent of the wear and tear on the pumps after 25 years, the site maintenance team is putting together a plan with Sulzer to refurbish the remaining pumps. This can be achieved without affecting the capacity of the site, with Sulzer providing the engineering and logistics support for a turnkey project.

James Wright concludes: "Our network of service centers means we always have a local presence that can provide a fast and responsive solution for any rotating equipment. Our one-stop-shop enables us to keep all mechanical and electrical repairs in-house, optimizing repair times and minimizing any downtime for our customers."

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