

Major Malaysian sewage facility uses Grundfos pumps

PULAU INDAH, MALAYSIA: The Pulau Indah sewage treatment plant is located near the North Port in Port Klang. The facility is designed for a development project catering to a population of 160,000 (P.E.). This newly developed sewerage system is one of the first in Malaysia where a vacuum system is used to transfer wastewater into the treatment plant. And Grundfos pumps have been used to ensure reliable and efficient pumping.

TOPIC:Wastewater treatment

LOCATION:Pulau Indah, Malaysia

COMPANY:Pulau Indah Sewage Treatment Plant

THE SITUATION

The island of Pulau Indah is located off the coast of Malaysia, not far from the country's capital, Kuala Lumpur. The island consists of mangrove swamp overlain with sand, and the water table is located approximately 1 metre below ground level. The soil conditions at the site meant that a gravity system would be unfeasible, so instead a vacuum system was designed.

The vacuum system made it possible to install the main vacuum sewers at shallow depths and eliminated the need to have four gravity pumping stations as originally planned. Instead, a single vacuum station collects sewage from the entire development project and pumps it to the nearby treatment plant. Designed by Iseki Vacuum Systems, the final solution reduced the initial investment cost by 40%. It also significantly reduced operation and maintenance costs for the local water authority.

THE GRUNDFOS SOLUTION

Grundfos was chosen to deliver a total of six large-scale raw sewage pumps. Each of the 80 kW pumps is explosion-proof and installed in a dry-pit pump house. They are rated to handle 250 l/s at 20 m head. These super-heavy-duty pumps are specifically designed to provide permanent peak efficiency and minimum downtime under the most difficult operating conditions, a fact

which makes them the ideal choice for demanding applications. Here, they tie in perfectly with the vacuum system designed by Iseki.

In addition to this, Grundfos also supplied four 6 kW SR sludge recirculation pumps. These pumps are used to recirculate wastewater from the aerobic tank to the anoxic tank at a rate of 300 l/s. Moreover, four 1.65 kW SuperVortex pumps handle return activated sludge transfer with ease.

THE OUTCOME

The pumps have performed as planned, providing a crucial contribution to the success of the complete solution. Grundfos is proud to be chosen to be part of this innovative and efficient system, which is perfectly adapted to maximise performance at a challenging site.

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