

Intake station for suction vehicle waste-water with high fat content

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In Singapore, an intake station is installed at a sewage treatment plant for waste-water especially with high fat content.

After the existing machine technology started ageing, our Partner, Relianz, received the order for two new treatment lines in the year 2014, which treat the very special waste-water, which is delivered without exception by suction vehicles.

The new plant consists of a screening plant with screening treatment, grit separator with grit washing system, as well as a flotation for the fat separation. Here, our partner could

equip the plant completely. In addition to our machine, two flotations of PROBIG were equipped with flight scrapers.

The screening plant consists of two sieve drums with a punched hole of 15 mm. The sieved screening is washed-out, pressed and disposed of with a screening wash press. The grit-water mixture with the fat enters a grit channel; the sand grit there is washed using a grit washing system. The organic substances and the fat enter the flotation, where they float and are disposed of using a flight scraper.

The plant was commissioned in December 2015. Since then, it has been managing the incoming fat and screening quantities easily.

The quantity of solids to be treated amounts to 12 m³/h for both the plants.

The plant is currently planning to install one more lane.

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FSM Center Flow Screen sets new standards

In 2016 as well, we could equip additional plants in China with Center Flow Screen for membrane systems.

In this case, our machines have proved themselves in addition to the robust design and with their reliability also with respect to the performance data requested and inspected by the customer.

It showed that the required throughput quantities have been easily managed by the machines. Because of that FSM could distinguish itself as against the market players by an extremely technical hydraulic design of the machines.

The filter cages developed and specially designed by FSM distinguish themselves by an almost twice as big surface, as compared to other systems.

FSM attaches special importance to the capacity used with screening when designing the screen. As drum screens or slot screens are installed in the feed in most of the plants in China, the proportion of screening collected for the 1 mm Center Flow screen is correspondingly high.

Here, not only the hydraulic capacity of the screen must be considered, it can also quickly result in water level differences of 1 metre or more. Especially the required intermediate cage sealing must resist it.

Another challenge is posed by the fat quantities found at the installation location of the screen. Although the plants are behind the grit chamber and fat trap, a significant quantity of fat reaches the screen.

FSM made extensive attempts in the preliminary stages to reach the optimum result. An investment that paid off -

the first screens have been running smoothly since 2 years now.

In addition to the numerous screens for membrane systems, FSM could also deliver different plants with filter belt screens and Center Flow screens (punched hole 5–6 mm) to China.

Owing to the hundred-percent availability of the machines, we are now involved in the planning of multiple underground inlet groups with our partner. Here, special importance is attached to the preliminary treatment as the wastewater will be subsequently pumped approx. 30 km to the sewage plant. In addition to coarse and fine screens, the grit chamber is also inspected and the grit treatment is carried out by FSM.



Multi rake screen for Cairo's one of the oldest pump station



Even about hundred years back, the English built one of the first pump stations for waste-water in Cairo. The drains are 16.8 m deep and 2 m wide.

After the screening was removed manually over the years, the pump station received a multi rake screen from FSM in the summer of 2014 and is being operated fully automatically ever since.

The complete assembly was done by our partner Mena Water.

Every screen can treat waste-water quantity of 3500 l/s, with a gap width of 50 mm.

For the customers, references of plants having a similar size and the efficiency and production quality were specially of decisive importance for the customers during the preliminary stages.

With the installation of the FSM products, the customer was not disappointed; the FSM machines did an excellent job even under extreme conditions.

Ropes, formwork panels, timber beams or drill cores are among the daily challenges for the screens. Owing to the rejects to be expected, the discharge is done directly in container as a washing or pressing would not be feasible.



Impressum

Informationen and news for customers
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IFAT 2016

Even this time, we can again add IFAT to the successful category. Numerous visitors found their way to our stall. For which we would once again like to whole-heartedly express our gratitude at this point.

This time, we could close out on several orders, 2 units for China among others, and get other partners abroad. Many customers of our partners made use of the opportunity to get first-hand technical information and to have a close look at the machines once in a "dry" state.

The focus of our machines that were displayed was in the field of screens. Here, a multi rake screen in the alpha-beta version, the screen grill is below 30° in the wastewater stream and below 85° in the discharge area, were exhibited in addition to the test winners from England (filter belt screen and center flow screens).

Several visitors found our Center Flow screen highly interesting.

For the third time, we again had a common stall with our partner Mena Water and Martin Membrane Systems. We would like to express our gratitude for the excellent atmosphere during the trade fare at this point as well.



We would also like to thank all the visitors of our stall party (320 persons!), in which Likusta (discharged air treatment) was involved as well.

There was an excellent, lively and congenial mood. In addition to an extensive contribution with the air guitar and singing, there was a lot of dance and laughter. A thank-you to the musicians as well.

The Management

FSM Frankenberger GmbH & Co.