

Gaobeidian Waste Water Treatment Plant Beijing / China



Dewatering building with locally produced belt filter presses

◀ Putzmeister piston pump with S-transfer tube
KOS 1470 HP with feed device THS 842 HCB

Task

The waste water treatment plant in the Gaobeidian district of Beijing is Beijing Waste Water Group's flagship plant. New techniques and technologies are tested here and the results published nationally. In 2003, Putzmeister had the opportunity to supply the plant with a high density solids pump for pumping sewage sludge over a large distance.

The dewatered sewage sludge from several belt presses is combined and pumped to a loading station using a high density solids pump. The sludge is then loaded onto trucks and taken to landfill sites, as before. Further processing stages are planned in which the dewatered sewage sludge will be dried and composted.

Material transport

The dewatered sewage sludge is pumped from the dewatering building to the container loading station via a DN 180 pipeline. This allows very easy, economical and low-maintenance material transport compared to all other transport systems.

Material

The material to be pumped is dewatered sewage sludge from a municipal waste water treatment plant which is dewatered to a dry matter content of approximately 22 % using belt filter presses.

Plant equipment

The dewatering building is equipped with the following plant:

- 1 KOS 1470 HP with THS 842 HCB
- 1 HMC-S valve
- 1 HA 132 E
- 1 Control cabinet with PLC
- 1 BLI system
- 1 Supply hopper with fill-level sensor

Output

The pump delivers approximately 24 m³/h.

Delivery pressure

The pump delivers at approximately 75 bar. If a BLI system is used, the pressure loss in the pipeline drops from 0.5 to 0.25 bar/m using standard polymers.

Pipeline length / diameter

The pipeline has a nominal diameter of 180 mm.

The distance from the dewatering building to the container loading station is approximately 300 m.

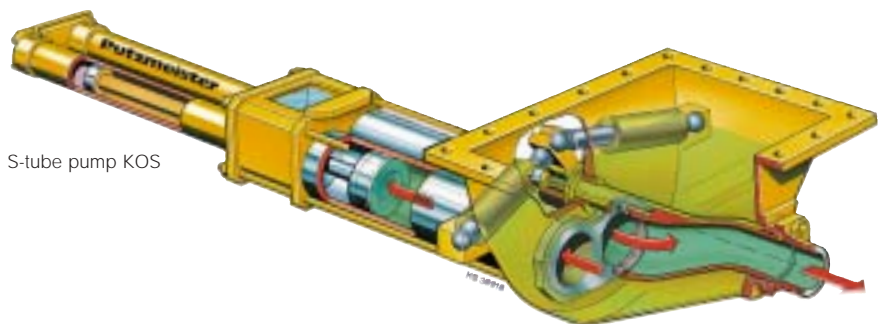
The pipeline is buried in the ground over a longer distance and is equipped with trace heating.



BLI dosing station with mixing tank and control equipment



Hydraulic power pack HA 132 E



S-tube pump KOS



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