BIOGEST®- FLUSHING SYSTEM TYP MF

WWTP Wadi Shallala in Greater Irbid, Jordanien

- Flushing valves on top of the flushing chamber
- Flushing without moving parts in waste water

- Commissioning: 2013
- Storage volume tank: 45,000 m³
- No. Flushing chamber: 5
- Length of flushing lane: 75 m
- Width of flushing lane: 10 m
- Slope: 1 %
- General Contractor: Passavant Roediger GmbH & Hussein Atieh Est.
- Operator: Yarmouk Water Company, The Hashemite Kingdom
- Consultant: Fichtner, Binnie Black & Veatch

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BIOGEST received in 2011 the order for the Vacuum flushing System Equipment of a 45,000 m³ retention tank at Greater Irbid WWTP Stage II Wadi Shallal in Jordan. During rain fall season, heavy rainfalls will be collected in the Wadi Shallala region. To prevent overload of the wwtp a retention tank with the dimensions of 50 x 75 m BIOGEST was constructed together with a very effective and BIOGEST developed vacuum flushing System in 2013.

This large tank was divided in 5 lanes of each 10 m width. That way the mechanical equipment could be enormously reduced to a minimum, in comparison to other systems on the market. The great depth of the tank could be used to optimize the flushing water volume. This system has no moving parts in contact with waste water, is operating automatically and do not need maintenance inside the tank. The level sensor where chosen as well contact free to complete the philosophy of no moving part in contact with waste water. No other cleaning system is so effective, widely applicable and user-friendly like the vacuum flushing System. The maintenance is therefore easy to be done by local operator staff.

These have been the main decisive points for using the BIOGEST Vacuum system for this project in the desert area. The maintenance effort is a minimum and easy to handle for the Operator, without entering the tank. BIOGEST has already delivered thousand of this system, worldwide and to different climate zones (from Canada to NZ). It is a most reliable and simple flushing system on the market that been proofed for many years.

1. Both the tank and flushing chamber are empty

2. The storm begins. Combined sewage and rain-water spill into the storage chamber and rises above the siphon level of the inlet to the flushing system.

3. The vacuum pump starts automatically drawing water from the storage chamber into the flushing chamber till the maximum level in the flush chamber is reached.

4. The storm subsides and the storage chamber empties leaving sludge and other sewage related debris on the chamber floor. The level in the flushing chamber is still held under vacuum.

5. Once the tank is empty the flushing sequence starts automatically. The vacuum seal is broken and a large volume of water surges from the flushing chamber driving all of the solids from the chamber floor.