HUBER Technology Hungary
Silex Water Technologies Kft.

HUBER TECHNOLOGY
WASTE WATER Solutions

Well Received Septic Sludge in Finland

Septage receiving station Ro 3 with integrated IRGA for screenings washing and enclosed Ro 8t screw conveyor forwarding the screenings to wash-press WAP/SL

Ro 8T screw conveyors move all screenings to the WAP/SL; visible is the top of its launder tank, the impeller motor and the rising pressure pipe; a highly compressed screenings plug is pushed out of its end

Septic sludge of around 70,000 inhabitants is collected in the surrounding area of the city of Lahti. Twelve different companies haul septic sludge. To prevent that they dump septic sludge into sewers or on wasteland, the city was looking for a place and method of treatment. The city selected a HUBER system for septic sludge receiving and pre-treatment at their existing central wastewater treatment plant. A card reader and flow meter permit data collection and billing. The incoming septic sludge is screened and the screenings, together with those from their existing wastewater screens, are intensively washed, dewatered and compacted in our super-launder wash-press WAP/SL. In comparison with their former piston press, our unit reduces their screenings mass to 25%.

The town Lahti is located about 60 km to the north-east of the capital Helsinki. The city and its surrounding area have a population of around 120,000. Only the urban area is connected through sewers to the central Ali-Juhakkala wastewater treatment plant that is design for a total population of 50,000. Septic tanks are commonly provided in suburban and rural areas. Municipal authorities were searching for a way and place to treat the septic sludge that is collected by ten hauling companies. They wanted to prevent that septic sludge is dumped into sewers or, even worse, on some wasteland. They determined that the Ali-Juhakkala plant has sufficient capacity to treat the septic sludge. However, dumping the septic sludge into their inlet structure was not acceptable because the plant operators had problems with their existing screenings handling system of their inlet screens.

Our proposed HUBER solution could kill several birds with on stone. We suggested installation of our septage receiving station ROTAMAT® Ro 3, which is essentially a tank-mounted Ro 1 fine screen with a bar spacing of 6 mm, to remove debris from the septic sludge. The screenings are washed a first time in the screens integrated screenings wash system IRGA. A flow meter measures the sludge volume discharged by each hauler and a card reader serves for identification, so that the haulers can be charged properly. We also offered covered Ro 8T screw conveyors for moving the screenings, not only from the septage receiving station, but also from the plant's inlet screens, to a common super-launder wash-press WAP/SL. This unit reduces the screenings' mass to a minimum by intensive washing and compaction. Since all equipment is enclosed, odour emissions are minimized. The city's staff and consultants were convinced that our proposed solution works best and issued their purchase orders.

Our system was installed and commissioned, and it works perfectly. The rugged fine screen Ro 1 of the septage receiving station remains unaffected by debris, gravel and grease. In the WAP/SL batches of screenings and wash water are intensively agitated by an open pump impeller that is mounted on the wall of the launder tank. After each washing cycle, the wash water containing almost all faecals and most of the COD is drained to the plant. The washed screenings, consisting mostly of fibrous material, are dewatered and compacted on their way through the unit's pressure pipe. In comparison to their former piston-press, our WAP/SL reduces the screenings' mass to about 25 %.

After our complete success in Lahti other Finish cities also selected HUBER solutions for their septic sludge and screenings handling problems.

By Ari Moisio, Country Manager Finland and the Baltic States

A HUBER csoport képviselete

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