



WORLD WIDE WEAVE

Sewage sludge dewatering for efficient disposal

As the largest of the five wastewater treatment facilities operated by the ARA Pustertal AG, the ARA Tobl plant in St. Lorenzen, South Tyrol, services a catchment area comprising 14 communes. Annually, this sewage plant treats six million cubic meters of wastewater and dewateres about half of all the sewage sludge produced in South Tyrol. It closes the wastewater treatment cycle through sewage sludge dewatering and thermal utilisation at a single location, thus facilitating forward-looking, energy-efficient disposal. A key factor for the efficiency of the sludge dewatering is a low-temperature belt dryer that uses a PPS 5099 dryer belt made by GKD.

Because of its topographical location and in the interests of residents and tourists, the Tobl plant is housed in caverns. The three parallel lines of the wastewater treatment plant and the digester towers are set about 200 metres into the mountainside. The sewage sludge produced in the plant is dewatered and incinerated – together with sludge transported in from other sewage plants – in an above-ground building at the foot of the mountain. About 25,000 tons of sludge per year are processed into granulate and subsequently incinerated. The energy from the incineration is recuperated via heat exchangers and used to power the low-temperature belt dryer. On the dryer belt, made of GKD process belt PPS 5099 and measuring 36 metres in length and 3.8 metres in width, the dry substance content of the sewage sludge is increased from 18 - 28 percent to an average of 92 percent. The robust monofilament process belt was specially designed by the experts at GKD's WEAVE IN MOTION business unit for this particular application and combines extreme resilience with high air permeability. Thanks to flexible pressure control, the low-temperature belt dryer also provides reliable and trouble-free processing of sludge with varying levels of water content.



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The end product – an extremely dry and practically dust-free granulate – allows energy-saving thermal utilisation without prior pelleting. With this efficient sludge dewatering system, which ensures cost-effective and climate-friendly sludge disposal, the ARA Tobl plant is optimally equipped to cater for the increasing stream of tourists expected during the coming winter months.

GKD – WORLD WIDE WEAVE

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